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Feedback

We are interested in hearing from you. Please tell us how you have used iHRIS Retain, any suggestions for improvements, or if you need additional help using iHRIS Retain by writing to: ihrisretain@gmail.com
About iHRIS Retain

Version 1.2

Welcome to iHRIS Retain!

Health worker retention is critical to ensure better access to health services. There are many interventions that can motivate health workers to accept posts and remain in rural and other underserved areas. As part of the decision-making process about the most appropriate retention strategy to pursue and to advocate for funding support, you will need to know how much the retention interventions will cost.

CapacityPlus, USAID’s flagship global human resources for health strengthening project, and the World Health Organization’s (WHO) Department for Health Systems Policies and Workforce (HPW) have joined together and responded to this need by developing this retention intervention costing tool.

iHRIS Retain is an open source tool to cost various health worker interventions and develop retention strategies to be implemented at the district, regional, or national level. The newest product in the CapacityPlus iHRIS Suite of health workforce software, the tool is structured according to the 2010 WHO Global Policy Recommendations for Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention. The software tool guides the user through the costing process step by step to capture the needed financial and health workforce data. Based on the inputs entered, iHRIS Retain calculates the total costs and generates reports for each retention intervention and targeted cadre, as well as different packages of interventions. Stakeholders can review the disaggregated and aggregated costing results to determine the economic feasibility of different retention interventions for inclusion in a retention strategy.

You do not need to be a health economist to use this tool; it will guide you through the costing process step by step.

What Is iHRIS Retain?

iHRIS Retain is an open source tool to cost health worker retention interventions as part of the process to develop retention strategies to be implemented at the district, regional, or national level. The newest product in the CapacityPlus iHRIS Suite of health workforce software, iHRIS Retain is structured around the 2010 WHO Global Policy Recommendations for Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention. The software tool guides the user through the costing process step by step to capture the needed financial and health workforce data. Based on the inputs entered, iHRIS Retain calculates the total costs and generates reports for each retention intervention and targeted cadre, as well as different packages of interventions and ultimately the aggregated cost of the retention strategy and compares it to available health sector funds. The resulting cost figures can then be shared with relevant stakeholders to discuss and determine the feasibility of the retention interventions within the available fiscal space and to budget for actual implementation.

How Was iHRIS Retain Developed?

The development and dissemination of iHRIS Retain version 1.2 is a joint collaboration between CapacityPlus and World Health Organization’s (WHO) Department for Health Systems Policies and Workforce (HPW).

CapacityPlus

CapacityPlus is the USAID-funded global project uniquely focused on the health workforce needed to achieve the Millennium Development Goals. A trained, motivated, and supported health workforce
provides access to vital health information, services, and commodities. Yet there is a global shortage of 4.3 million health workers and the World Health Organization has named 57 countries facing a health worker crisis. Placing health workers at the center of every effort, CapacityPlus helps countries achieve significant progress in addressing the health worker crisis while also having global impact through alliances with multilateral organizations. CapacityPlus serves partner countries and multilaterals by offering state-of-the-art expertise, models, tools, training, and analyses adapted to each context. These services help countries move closer to having the right health worker in the right place with the right skills and support. The project works with public, nonprofit, faith-based, and for-profit organizations contributing to better human resources for health.

The CapacityPlus Partnership is composed of:

- **IntraHealth International, Inc.** (lead partner)
- **Abt Associates**
- **IMA World Health**
- **Liverpool Associates in Tropical Health** (LATH)
- **Training Resources Group, Inc.** (TRG)

The CapacityPlus Associate Partners are:

- African Population and Health Research Center (APHRC)
- Asia-Pacific Action Alliance on Human Resources for Health (AAAH)
- West African Institute of Post-Graduate Management Studies (CESAG)
- Partners in Population and Development (PPD)

**World Health Organization (WHO)**

The WHO Department for Health Systems Policies and Workforce (HPW) supports Member States, and collaborates with development partners and other parts of the WHO Secretariat in seeking to improve health systems performance and health outcomes, particularly for poor people. Its main functions are to provide global leadership and strategic direction for WHO in relation to strengthening of national health systems including Human Resources for Health, health systems governance, improving service delivery and aid effectiveness. The Department is concerned with WHO's overall contribution to the attainment of universal health coverage and the transformation of health systems based on primary health care (PHC).

**Why the Need for iHRIS Retain?**

Retention is a complex issue. Many social, professional, and economic factors influence a health worker’s decision to work in rural or other underserved areas. Evidence and experience show that no single
retention intervention will be effective, but rather an appropriate combination or “bundle” of complementary and well selected interventions is needed to retain health workers (WHO, 2010).

The 2010 WHO Global Policy Recommendations for Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention recommend that in order to motivate health workers to serve in hard-to-reach areas, health service organizations must implement a package of well-selected retention interventions. While country stakeholders recognize the need to address health worker retention, health sector budgets in developing countries are limited.

Questions to consider are: “Which interventions should be included in a health worker retention strategy? —and importantly, from the feasibility standpoint— "How much will the intervention packages cost? iHRIS Retain was designed to address this second question.

Who Are the Users of iHRIS Retain?

Instead of depending on external technical assistance, iHRIS Retain is designed with the noneconomist in mind, such as human resources for health (HRH) managers and other health officials. One does not need to be an economist to take advantage of the tool and understand and use the results.

What Are the Benefits of iHRIS Retain?

iHRIS Retain helps remove some of the mysticism of health economics by putting a powerful tool in the hands of human resources for health (HRH) managers that yields results close to a traditional costing exercise at a fraction of the cost, without requiring guidance from a senior health economist. The software provides the flexibility of inputting different retention interventions for targeted cadres to obtain the most accurate financial scenarios for decision-making. With its focus on self-reliance, the retention costing tool: promotes country ownership, increases self-sufficiency of host country counterparts in making and acting on HRH decisions, reduces reliance on external technical assistance, and empowers stakeholders to implement economically affordable retention strategies. iHRIS Retain can be used in conjunction with the CapacityPlus Rapid Retention Survey Toolkit. The Rapid Retention Survey Toolkit can be used to determine health worker preferences for the combinations of retention interventions and incentives which would most likely motivate health workers. When the Rapid Retention Survey Toolkit and iHRIS Retain are used together, they can help stakeholders to design a more affordable, cost-effective retention strategy.

References


Before You Begin

Before you begin using iHRIS Retain, consider the following:

- Read the user manual to familiarize yourself with the iHRIS Retain software, its format, and outputs could be helpful before you begin inputting actual costing exercise information.

- In addition, if you are not yet familiar with the WHO Global Policy Recommendations for Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention

- The iHRIS Retain software will prompt you to input information about your budget, the cadres you want to target, and details about the retention interventions that you are considering to include in your overall retention strategy. For this reason, it may be helpful to gather some of this information in advance so that it is easily on hand.

- Most users work with the online, internet-based version of the software. However, there is an offline version. If you expect that you will need access to your Costing Exercises and projects offline, or on poor Internet connections, you will likely want to use the offline version.

- iHRIS Retain is constructed to use standard web technologies. This means it looks and operates like a sophisticated web application. Although it should work with most modern web browsers, it has only been tested in the following: Internet Explorer 7, Internet Explorer 8, Internet Explorer 9, Firefox, Chrome, and Safari.

- In order to download the reports in Step 6, you will need to have Microsoft Excel downloaded on your computer.

- Some of the terminology used in this manual and the software itself may be new to you or the people with whom you are working. To see a definition or explanation of the terminology, roll your mouse over any (?) to the right of the word and it will appear:

  The total health sector expenditures (or budget) should reflect all operating costs for the health sector, including personnel and recurrent costs that are funded directly by your organization.

  The definitions of most terminology are also included in the User Manual under the step in which the terminology appears in the iHRIS Retain software. The Glossary of Terms also includes definitions for selected terms.

- This user manual has been developed for iHRIS Retain, version 1.2.
Getting Started

From the iHRIS Retain home page (http://retain.ihris.org/retain):

You can navigate through the menu options along the purple menu bar:

- About iHRIS Retain
- Other iHRIS Software

(click on the buttons to follow to the link)

You can also click on the purple links in towards the bottom of the page:

- Create New Costing Exercise
- Work on Existing Costing Exercise
- Resources
- User Manual
- Change Password

(Note: you must first have a user account to: create new costing exercises, work on existing costing exercises, or change your password)
From the About iHRIS Retain page, you can also access additional purple menu bar options:

**Resources**
- related reference materials about retention interventions;

**Feedback**
- send comments or questions to the iHRIS Retain developers

(Note: you must first be signed into your user account)

**Help**
- access this User Manual and iHRIS Retain Quick Tips.

(click on the buttons to follow to the link)

**Create a User Account**

To start using iHRIS Retain, you will need to create your own user account. Click on Create a Costing Exercise or Work on Existing Costing Exercise and you will be automatically directed to the iHRIS Retain login page:
Click on **Create User Account** and complete the entry fields:

![Create User Account](image)

Please make note of your Username and Password because you will need to remember it to access your iHRIS Retain account.

You will return to the home page and be prompted to verify your email address:

Please check your email to confirm your e-mail address *(email address provided)* in order to login.

An automated email titled **“Verify iHRIS Retain Account Request”** will be sent from [ihrisretain@gmail.com](mailto:ihrisretain@gmail.com) to the email address that you provided. You must click on the link provided in the email in order to complete account creation. You may need to check your junk mail or spam folder to retrieve the message, as your mail server may not recognize the [ihrisretain@gmail.com](mailto:ihrisretain@gmail.com) address.

If you have not received the automated email 15-30 minutes after the creation of your new user account, you may click on **Resend Account Request Email** and provide your email address so that the verification email can be resent to your email account.

If you do not remember your Username and/or Password, click on **Forget username or password?** to either reset your password by entering your username, or entering your email address to see your username.
Create a New Costing Exercise

Once you have created a new user account, you can start working on costing exercises. From the iHRIS Retain home page, click on Create New Costing Exercise.

What is a Costing Exercise?

Using the iHRIS Retain, costing exercises allow you to break down the components of a retention strategy. The following is a brief overview of what information the iHRIS Retain software will prompt you to input.

Basic Information

Name your exercise and define its time period.

Data entry within iHRIS Retain is organized into six main steps:

Step 1: Financial Information
This step captures basic information related to health expenditures, including wage information. You will provide the currency in which you would like to cost retention interventions, as well as your estimated annual budgets for both recurrent and personnel expenditures.

Step 2: Targeted Cadres
In this step, you will provide information on the current and projected numbers of targeted health worker cadres. You may enter in cadre names as specifically or broadly as necessary. For example, depending on how you will target your interventions, you may enter Registered Nurse (Senior) and Registered Nurse (Junior), or group all nurses and all midwives together.

Once you have defined the parameters of the costing exercise in terms of your budget and the types and number of health workers that you may be targeting in the interventions (Steps 1-2), you will describe the different types of interventions that you are considering targeting in your retention strategy (Step 3).

Step 3: Intervention Selection

This step allows you to provide specific information related to the costs of the interventions that you are considering as part of your overall retention strategy. These interventions are organized into four categories:

- A. Education
- B. Regulatory
- C. Financial Incentives
- D. Professional and Personal Support

The 16 interventions, from the 2010 WHO Global Policy Recommendations are labeled as A1-D6. Because there may be many individual activities that are part of the intervention, the iHRIS Retain software has broken them down into sub-categories, or intervention activities, to make it easier to cost out the interventions. For each intervention activity, you will estimate the costs associated with it.
We suggest that you enter information for various cadres separately. For example, if you are considering an education allowance for three different cadres, enter in the data on costs and numbers of targeted workers for each cadre separately.

In the description box for intervention activity, it is suggested that you provide the most specific description possible. For example, consider specifying “Housing allowance in rural zones” rather than just “Housing,” as this description text will help you during later steps of the costing exercise to distinguish between multiple intervention activity descriptions. Below the description, you will be asked to check a box to determine which cadre or cadres you are targeting through this activity.

Step 3 is the part of the costing exercise that may take the most time.

**Step 4: Information Review**
In this step, you can review and modify the financial, cadre, and intervention cost information you entered in Steps 1-3. Click on the Edit or Delete links to the left of each entry to modify or remove the entry.

Once you have completed your information review and made any edits, proceed to **Step 5: Package Design** by clicking on the Step 5 link at the top right of the window. (Do not review the “Packages”, or “Reports” tabs until you have completed Step 5.)

**Step 5: Package Design**
This step allows you to create different packages of interventions targeting various cadres of health workers.

A package is a combination of selected retention interventions, composed of activities which help you to calculate the costs associated with the intervention. We recommend that you create separate packages for different cadres. For example, you can design packages according to the cadres that you selected in Step 2 of the costing exercise. For example: you may combine interventions into different possible packages that target nurses for which you will be able to compare costs, other packages that target pharmacists, and others that target doctors. Once you have created individual cadre packages, you may also wish to create larger packages that combine interventions offered to multiple cadres.

When you have finished designing your packages, you may return to **Step 4** to review them by clicking Step 4 at the top center-right of the window. If you are finished reviewing your packages, then click on **Step 6: Reports Review** at the top far right of the window.

**Step 6: Reports Review**
This step allows you to review the reports generated from the costing exercise and compare the costs of different retention interventions and packages. You can download a selected report by clicking on the Download button at the bottom of the report (please note that it may take a few seconds to load) to open and save it in Excel.

**Basic Information**

Complete the following entry fields on this page to create your new costing exercise:

**Name of Costing Exercise.** Assign a unique name that allows you to easily distinguish this costing exercise for future revisions or reviews. For example: “Incentives for Doctors”, “Kigoma District Interventions”, or “Northern Region Retention Strategy”.

**Costing Exercise Description.** While it is optional, it is recommended that you add provide further details to describe the costing exercise for future reference. Consider including: the types of health workers targeted, a description of the interventions, the geographic scope of the interventions (national, regional, district level).
**Date of Exercise.** Enter today’s date. This is important in case the costs of your interventions change over time, as the result of new information, inflation, a new donor, or new partners. It is important to keep a record of when your costing exercise was made so that you know what stage of your retention strategy development is reflected by your costing projections.

**Current Year.** Your costing projections in future years will be adjusted for inflation based on the current year.

**Costing Start Year.** Select the year that the retention interventions are estimated to be implemented.

**Costing Timeframe (in years).** This is the number of years that the costing exercise will cover. The costing projections that the iHRIS Retain software (v1.2) will produce can be designated for between one and five years.

For example, the completed fields will appear something like this:

**Create a New Costing Exercise**
Complete the following information to open a new costing exercise file.

All fields with (*) are mandatory

<table>
<thead>
<tr>
<th>Name of Costing Exercise (?) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Region - Rural Strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costing Exercise Description (?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy targeting all doctors, senior nurses, midwives and junior nurses in the rural posts in the Northern Region</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of Exercise (?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 July 2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Year (?) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costing Start Year (?) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costing Timeframe (in years) (?) *</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

Review the information entered well. **You will not be able to edit any of this information later in the costing exercise.**

Then click **Save** to continue.
Step 1 - Financial Information

When you click the button at the bottom of the Basic Information page, you will see that your costing exercise title is displayed under the purple menu bar options. The six main steps of the costing exercise that you will follow are listed just below its name and description:

Now that you have named your costing exercise and set its time period, you will begin by entering the Financial Information on which the costing exercise analysis will be based.

Budget (Local Currency)

Here, you define the total amount of money available for your retention strategy. Complete the following entry fields on this page:

Currency. Enter your country’s currency.

Please note that for some regional currencies, such as Central African Franc (XAF), you may need to search for a country other than yours. For example, Gabon is listed for the Central African Franc (XAF), although it is also the currency used in Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea, and Gabon.

Total Health Sector Expenditures/Budget. Enter the annual budget for the health sector as defined by the geographical area of your costing exercise (i.e. national, regional, district), including the recurrent costs and personnel costs funded directly by your organization. If you are conducting a costing exercise that is for only one region, then this number would be the total regional health sector budget.

Total Recurrent Expenditures/Budget. As part of the total health sector budget, enter the annual operating expenses for the health sector, including goods, services, supplies and other recurring costs that allow your organization to operate. Do not include personnel costs or expenses.

Total Personnel Expenditures/Budget. As part of the total health sector budget, enter the annual amount budgeted for supporting the salaries, allowances and benefits for your organization’s staff and consultants.

Please note that in most cases, the total recurrent expenditures and total personnel expenditures budgets should not add up to more than the total health sector expenditures.

Exchange Rates

Exchange Rate. Enter the exchange rate of your country’s currency to the United States Dollar. Please refer to Oanda (http://www.oanda.com/currency/_converter/) if you would like to check current or historical exchange rates. You have the option to enter an average or historical exchange rate, and can note its date in the Date of Exchange Rate entry field, if you estimate that this will allow you to make a more accurate projection. If your entire budget is in US dollars, set the exchange rate as 1.
You may also consider using the same exchange rate as is used by your finances or budgeting department. As it is impossible to predict what the actual rates will be over time, with rates changing daily with global financial markets, many budgeters will use an average exchange rate.

**Inflation Data**

**Inflation Rate.** This is the rise in the general level of prices of goods and services in an economy over a period of time. If you have an estimated inflation rate and would care to include it within your costing exercise projections, enter your country’s annual inflation rate. Entries for future years are available to factor inflation into longer-term cost projections.

Please refer to the [World Bank’s data indicators](http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG) to view current and historical inflation rates.

When completed, the **Step 1: Financial Information** entry fields will appear something like this:

**Financial Information**

Enter the specified financial information on which the costing analysis will be based.

When you have finished, click on the **Save** button below to proceed to **Step 2: Targeted Cadres.** You can to return to **Step 1** to modify your financial information at any point during your costing exercise by clicking **Step 1** on the task bar at the top left of the screen.

All fields with (*) are mandatory

When you have finished, click on the **Save** button at the bottom of the page to proceed to **Step 2: Targeted Cadres.** You can to return to **Step 1** to modify your financial information at any point during your costing exercise by clicking **Step 1** on the task bar at the top left of the screen.
Step 2 - Targeted Cadres

In Step 2 – Targeted Cadres, you will specify all the health worker cadres that you would like to consider targeting through the retention interventions. A cadre is a job classification within your health sector.

Enter information about each targeted health worker cadre (i.e. nurse, doctor, pharmacist, allied health professional) separately in the sections below:

Current Positions

Enter the number of health worker positions that your health sector or organization has at present. You will categorize the positions in two different ways: as urban or rural, and as being filled or yet to be established.

Filled positions. The number of health worker positions in this cadre where there is a currently employed staff member.

Established positions. The number of health worker positions in this cadre that have been accounted for in your personnel budget but have not yet been filled.

Urban / Rural. This definition varies throughout the world. Use your country’s, sector’s, or organization’s definition of urban/rural zones when dividing the filled and established positions.

Projected Positions

Project the number of health worker positions that will be filled on a yearly basis, or instead as a percentage of the total established positions for the cadre over the course of the costing timeframe.

Estimated number of positions for this cadre to be filled per year. These projections will be used to calculate the costs of the intervention activities that you will describe in Step 3.

When completed, the Step 2: Targeted Cadres entry fields will appear something like this:
Enter as many health worker cadres as you would like included in the costing exercise.

To add an additional health worker cadre, click: 

To remove a cadre, click: 

When you have finished, click on the button at the bottom right of the window to proceed to Step 3: Cost Interventions. You can return to Step 2 to make changes or additions to your targeted health worker cadres at any point during your costing exercise by clicking Step 2 on the task bar at the top left of the screen.
Step 3 - Intervention Selection

You are now ready to begin selecting retention interventions and their specific activities, which will allow you to calculate the costs associated with the interventions that you would like to consider for your retention strategy.

The retention interventions are categorized as per the 2010 WHO Global Policy Recommendations for Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention. Roll your computer mouse over the (?) and click on (Learn More) to the right of the intervention to read about evidence and specific ideas concerning this intervention from the WHO Policy Recommendations. Within this User Manual, the yellow boxes under each intervention category repeat the same evidence and specific ideas as these sections.

When you click on the intervention you will see a list of the intervention activities that will aid you in calculating the costs of the intervention. Save the activity by clicking Save at the bottom of the screen.

Repeat for as many of the retention interventions that you would like to consider in your costing exercise. When you have finished, click on the Continue button at the bottom right of the window to proceed to Step 4: Review Information, where you can review all the data you have input in your costing exercise.

A. Education Interventions

Education is the foundation for producing competent health workers. It is therefore important to select the “right” students, that is, those who are more likely to practice in remote and rural areas, and to train them in locations and using methods and curricula that are more likely to influence their future practice location. It is also important to support health workers’ need to continue learning throughout their careers, particularly in isolated areas where access to knowledge and information is not easy. (WHO, 2010)
A1. Students from Rural Backgrounds

Get the “Right” Students - Use targeted admission policies to enroll students with a rural background in education programs for various health disciplines, in order to increase the likelihood of graduates choosing to practice in rural areas.

Why is it important to recruit medical students who come from rural, remote or underserved areas?

There is a compelling body of evidence from high-, middle- and low-income countries that a rural background increases the chance of graduates returning to practice in rural communities. Some studies have shown they continue to practice in those areas for at least 10 years. A Cochrane systematic review states: “It appears to be the single factor most strongly associated with rural practice”.

Medical schools tend to have high education standards for admission. Countries with a lower level of secondary education in rural areas compared with urban areas may need to link specific quotas to admit students from rural backgrounds with academic bridging programs. China, Thailand and Viet Nam are a few of the countries that have adopted this approach. The long-term solution is for governments to improve the quality of primary and secondary education in remote and rural areas.

Students from rural areas may need more financial assistance during their studies, as rural families often have significantly lower incomes than urban families. They may also need more academic and social support, because of the transition from a rural to an urban area.

When students from rural backgrounds are trained in schools also located in rural areas, using curricula that are adapted for rural health needs, they are more likely to return to work in those areas. Hence, it is important for policy-makers to bundle together at least these three interventions for a better result (A1 bundled with A2 and A3, and with B4).

More research is needed to understand whether a certain “profile” of a future rural health worker can be identified: this may be related to geographical origin, gender, specific behavior traits, such as altruism, or other intrinsic motivation factors. Such knowledge would inform selection and recruitment policies, as well as counseling of high-school students prior to entering higher education.

- excerpt from the WHO Global Policy Recommendations, 2010

Develop rural recruitment plan or policy

Why should it be ensured that rural retention policies are part of the national health plan?

This is about the principles of alignment and policy coherence at the country level. Rural retention policies must be grounded in a costed and validated national health plan. A national health plan provides the framework for holding all partners accountable for producing tangible and measurable results; it is at the heart of health development that is country-led, country-owned, and fully aligned with national priorities and capacities.

A national health workforce plan, which is an integral part of a country’s national health plan, sets out the projected numbers and types of health workers needed in the future, the policies and strategies to scale up needed health workers, the strategies to retain and motivate them, and the costs of implementing all the required interventions.

Given that the ultimate goal is to improve health outcomes, it is essential that policy interventions and plans for producing and allocating the most appropriate types of health workers are developed to respond to the health needs, perceptions, expectations and health-seeking behaviors of people living in rural and remote communities.
Any retention strategy should be linked to the broader national and local health system structures and functions, to take advantage of synergies and increase efficiencies. For example, if a country has a national health plan and health sector reforms are under way, there may be an opportunity to prioritize the upgrading of rural health facilities and improve the working environment as part of a national health facility expansion plan. In contrast, a plan to expand public- or private-funded health services in urban areas may work against new strategies for attracting people to work in rural areas.

- excerpt from the WHO Global Policy Recommendations, 2010

To complete information entry for this intervention activity:

This section allows you to define the costs related to organizing these retention workshops, including the costs of the staff, consultants, and workshop costs such as travel, venue, and per diem. Do your best to fill in all fields as accurately as possible.

a. Describe the intervention activity (geographic location, length or type of activity, etc.)
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
c. Enter the number of workdays and the cost per day for consultant or staff.
d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.
e. Enter any other anticipated costs that are related to developing a rural recruitment plan.

In addition, there is an entry field for including other costs that may not fit into the above categories. If you have other expenses related to this activity, then enter them in the Other Costs section:
You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost. Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Provide ongoing management of program

Ongoing program management can be an important part of effectively implementing a rural recruitment plan in which students from rural, remote or underserved areas are training to become health workers.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the amount (in your selected currency) for the manager of the selected cadre's monthly salary.

d. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the manager works full-time for ongoing program management, then enter 100%.

e. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.

f. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the support staff works full-time for ongoing program management, then enter 100%.

g. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

h. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity. If the other staff works full-time for ongoing program management, then enter 100%.

i. Enter the cost of any office supplies and communications related to providing ongoing program management.

j. Enter any other costs that may be related to providing ongoing program management.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct regular recruitment visits**

Recruitment visits made to rural, remote or underserved areas to solicit students’ interest in becoming health workers can help ensure that they are enrolled in training programs.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc.)
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of rural recruitment site visits planned per year for this cadre.

d. Enter the transportation costs (in your selected currency) for each visit.

e. Enter the lodging and per diem costs (in your selected currency) per visit.

f. Enter the personnel costs (in your selected currency) incurred for each recruiter or manager per visit.

g. Enter any other costs that may be related to conducting recruitment visits in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking .

Once completed, click .
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide educational support programs for students from rural areas**

Students from rural, remote or underserved areas may require additional support during their academic studies.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the total number of students to be supported.

d. Enter (in your selected currency) the tuition costs for each program in which the student is enrolled.

e. Enter (in your selected currency) the cost of housing per student.

f. Enter (in your selected currency) the costs to provide stipends per student.

g. Enter any other costs related to providing educational support for students from rural, remote or underserved areas in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide stipend for students from rural areas**

Students from rural, remote or underserved areas may require additional financial support.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of students to whom you will provide a financial stipend for each year of your costing timeframe.

d. Enter the amount (in your selected currency) of the stipend.

e. Enter any other costs related to additional activities to provide stipends for students from rural, remote, or underserved backgrounds in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](#) or ![Remove Other Cost](#).

Once completed, click ![Save Intervention Activity](#).

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click ![Cancel](#). You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

### Other activities

This section allows you to design your own A1 interventions that could contribute to recruiting and/or providing support (financial, social, logistical, and academic) for students from rural, remote or underserved backgrounds to successfully complete training become health workers.

**To complete information entry for this intervention activity:**

- a. Describe the intervention activity (geographic location, etc).
- b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
- c. Enter any other costs related to additional activities to achieve recruiting more students from rural, remote, or underserved backgrounds in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**A2. Health Professional Schools Outside of Major Cities**

Train students closer to rural communities - Locate health professional schools, campuses and family medicine residency programmes outside of capitals and other major cities, as graduates of these schools and programs are more likely to work in rural areas.

Large observational studies from high- and low-income countries show that medical schools located in rural areas are likely to produce more physicians working in rural areas than urbanely located schools. For example, a recent review found that medical schools in the USA with the following characteristics tend to produce more rural physicians: located in rural states, public ownership, offering training in generalist specialties and receiving little federal research funding. A study in the Democratic Republic of the Congo showed that location of a school in a rural area was strongly associated with subsequent employment in the rural area. A study in China showed that rural medical schools produce more rural physicians than medical schools located in metropolitan centers.

However, it is often difficult to determine the independent effect of rural location of schools, because research findings tend to be confounded by such factors as recruitment of more rural students in such schools. There is limited
evidence that graduates from postgraduate residency programs located in rural areas, particularly in family medicine, are also more likely to practice in a rural location, but there are some methodological limitations for this evidence.

Complementary strategies such as distance education and e-learning approaches should be considered as they may allow urban-based schools to extend beyond their usual catchment areas and may give more rural residents access to education without having to relocate to distant cities. Combining this intervention with targeted admissions and curricula changes (A1 and A3) is likely to yield better results.

Some evidence is emerging about the benefits of locating schools for other health professions in rural areas in developing countries as well, but the effects need to be better studied. There is emerging evidence about the importance of promoting a social accountability framework for medical education in underserved areas to better respond to the needs of these communities. For example, several need- and outcome-driven medical schools in remote or rural areas in Australia, Canada, the Philippines and South Africa formed a network with “a core mission to increase the number, quality, retention and performance of health professionals in underserved communities” (http://www.thenetcommunity.org/).

The principles of social accountability underpinning the training provided by these schools are highlighted below:

**Principles of social accountability underpinning the Training for Health Equity Network’s (THENet) medical schools**

1. Health and social needs of targeted communities guide education, research and service programs.
2. Students are recruited from the communities with the greatest health-care needs.
3. Programs are located within or in close proximity to the communities they serve.
4. Much of the learning takes place in the community instead of predominantly in university and hospital settings.
5. The curriculum integrates basic and clinical sciences with population health and social sciences; and early clinical contact increases the relevance and value of theoretical learning.
6. Pedagogical methodologies are student-centered, problem- and service-based and supported by information technology.
7. Community-based practitioners are recruited and trained as teachers and mentors.
8. Schools partner with the health system to produce locally relevant competencies.
9. Faculty and programs emphasize and model commitment to public service.

- excerpt from the WHO Global Policy Recommendations, 2010

**Construct new facilities (including school, dormitory, staff housing, etc.)**

This section allows users to budget the costs associated with constructing a new health professional school training facility, dormitory, or attached health facility in a rural, remote or underserved area. There are separate sections for you to enter the costs related to equipping or furnishing each type of infrastructure.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, school name, type of infrastructure, etc).
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the name of the facility or location to be constructed.

d. Enter the estimated construction cost per square meter (m²).

e. Enter the estimated size of the training facility in square meters (m²).

f. Enter the estimated size of student dorms in square meters (m²).

g. Enter the estimated size of staff housing units in square meters (m²).

h. Enter the estimated size of the clinical facilities in square meters (m²).

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Equip/Furnish school**
This section allows you to calculate the costs associated with equipping or furnishing a health professional school in a rural, remote or underserved area in order to help students better understand rural issues and to receive improved training on rural issues.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, school name, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter costs, either by:
   i. entering the total amount for equipment / furniture, which assumes that you have already calculated the itemized costs or total budget; or
   ii. entering itemized costs based on the type of equipment, its unit cost, and the number of units required under each tab: Computer, Furniture, Electrical and Other Training Equipment. To enter itemized costs, select “Yes” from the drop down menu under “Do you want to enter itemized costs?” and you will find categories for each tab. Please note that there are default items (i.e. telephone, copier machine, and computer under the Computer Equipment category), but you can also enter your own items using the Other (Specify) field.

![Image of activity entry form showing cadres, costs entry tabs, and itemized costs option]
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

### Equip/Furnish dorms

This section allows you to calculate the costs associated with equipping a dormitory or providing lodging for students attending health professional schools that are located in rural, remote or underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, school name, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.
d. If you want to enter the lump sum for equipping or furnishing dormitories, then enter it under **Total Cost for Furnishing**.

e. If you prefer to enter the individual costs related to equipping or furnishing dormitories, then select “Yes” from the drop-down menu and enter each related cost:
The default itemized entry fields are: tables, desks, chairs, beds, or shelves and cabinets. There is also an option to enter any other unspecified items, unit costs and number of units required if needed.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Equip/furnish attached health facility**

This section allows you to calculate the costs related to equipping or furnishing a health facility in a rural, remote or underserved area.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, school name, health facility type, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter costs, either by:
   i. entering the total amount for equipment / furniture, which assumes that you have already calculated the itemized costs or total budget; or
   ii. entering itemized costs based on the type of equipment, its unit cost, and the number of units required under each tab: Computer, Furniture, Electrical and Other Training Equipment. To enter itemized costs, select “Yes” from the drop down menu under “Do you want to enter itemized costs?” and you will find categories for each tab. Please note that there are default items (i.e. telephone, copier machine, and computer under the Computer Equipment category), but you can also enter your own items using the Other (Specify) field.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Ongoing management for attached health facility**

This section allows you to calculate the costs associated with the ongoing management of the attached health facility.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, school name, health facility type, level of management required, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter (in your selected currency) the health professional school dean’s or director’s monthly salary.
d. Enter the dean or director’s percentage of time worked, i.e. whether s/he is working full- or part-time at this health facility. If the dean/director works full-time to manage the attached health facility, then enter 100%.

e. Repeat steps b. and c. for additional staff members: the assistant director, support staff and other staff:
   
i. Enter (in your selected currency) the staff member’s monthly salary.
   
ii. Enter each staff member’s percentage of time worked, i.e. whether s/he is working full- or part-time at this health facility. If the staff member works full-time to manage the attached health facility, then enter 100%.

f. Enter the cost of any office supplies or communications related to on-going management of the attached health facility.

g. Enter any other costs related to additional activities to achieve recruiting more students from rural, remote, or underserved backgrounds in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost]. Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Maintenance/repair for all facilities**

This section allows you to calculate the long term costs for maintaining the facilities configured in the previous areas of this step.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, school name, type of infrastructure, level of maintenance or repair needed, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. **Funds reserved for repair per year.** Enter the amount (in your selected currency) to be set aside annually for unexpected repairs (i.e.: computer viruses, roof leaks, a broken printer).

d. **Annual maintenance costs.** Enter the amount (in your selected currency) to be allocated to the long-term upkeep of the facilities (i.e.: replacing lighting fixtures, tools, fuel for a backup generator).

e. Enter any other costs related to additional activities to achieve recruiting more students from rural, remote, or underserved backgrounds in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Other activities

This section allows you to design your own A2 interventions that could contribute to developing, improving, or maintaining health professional schools in rural, remote or underserved areas (policies, finances, logistics, etc).

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities to achieve recruiting more students from rural, remote, or underserved backgrounds in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

A3. Clinical Rotations in Rural Areas During Studies

**Bring students to rural communities** - Expose undergraduate students of various health disciplines to rural community experiences and clinical rotations as these can have a positive influence on attracting and recruiting health workers to rural areas.

Undergraduate training, particularly for physicians, is typically conducted in tertiary care institutions using the latest available technology and diagnostic tools. Once medical studies finish, young graduates are left without skills to deal with health situations in areas where advanced technology and tools are not available. The same holds true for other health professions. Clinical placements in rural areas during undergraduate studies is one way to expose students to the health issues and conditions of service within rural communities, and give them a better understanding of the realities of rural health work.

The evidence on the effects of clinical rotations on improved retention is mixed, but it does show that exposure to rural communities during undergraduate studies influences subsequent choices to practice in those areas, even for students with an urban background. These studies, which were conducted for medical, pharmacy and nursing
students, also show improved competencies in dealing with rural health issues among students who completed a rural placement during their studies. However, as the rural placements are not always mandatory, there is sometimes the possibility that students from a rural background may self-select for these programs, bringing potential confounders to the results of the studies.

Rural-based training may allow health workers to “grow roots” in such locations and facilitate the development of professional networks. It may also increase awareness of rural health, even for those who may eventually choose not to practice in a rural area on a permanent basis. The effect can be larger if this intervention is associated with A1 (targeted admission), A2 (location of schools outside major cities) and A4 (changes in curricula). The optimum duration of the rural exposure during undergraduate studies is not known. It varies from four weeks up to 36 weeks of placement, and it can be mandatory or voluntary.

The local availability of mentors, trainers and supervisors is a critical component of this intervention. Stronger study designs are needed to better address confounders in self-selection of students in the rural clinical placement programs. More studies are needed on other types of health workers and from developing countries.

- excerpt from the WHO Global Policy Recommendations, 2010

**Design and plan program**

This activity is configured to allow the user to design programs for clinical rotations in rural areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of clinical rotation, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide ongoing management of program**

Ongoing program management for implementing clinical rotations in rural areas during health professionals’ program of study can be an important part of an effective retention strategy.

**To complete information entry for this intervention activity:**

a. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

b. Enter the amount (in your selected currency) for the manager of the selected cadre's monthly salary.

c. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the manager works full-time for ongoing program management, then enter 100%.

d. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.
e. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the support staff works full-time for ongoing program management, then enter 100%.

f. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

g. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity. If the other staff works full-time for ongoing program management, then enter 100%.

h. Enter the cost of any office supplies and communications related to providing ongoing program management.

i. Enter any other costs that may be related to providing ongoing program management in the **Other Costs** section.

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**A3 Intervention Activity: Provide on-going management of program (?)**

<table>
<thead>
<tr>
<th>Activity Description (?) *</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadres Targeted by Activity (?)</td>
<td></td>
</tr>
<tr>
<td>Doctors</td>
<td></td>
</tr>
<tr>
<td>Midwives</td>
<td></td>
</tr>
<tr>
<td>Nurses</td>
<td></td>
</tr>
</tbody>
</table>

**Base Costs**

Manager’s salary (per month)  

Manager time (100% if full-time)  

<table>
<thead>
<tr>
<th>2012</th>
<th>%</th>
<th>2013</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
</table>

Support staff’s salary (per month)  

Support staff time (100% if full-time)  

<table>
<thead>
<tr>
<th>2012</th>
<th>%</th>
<th>2013</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
</table>

Other staff’s salary (per month)  

Other staff time (100% if full-time)  

<table>
<thead>
<tr>
<th>2012</th>
<th>%</th>
<th>2013</th>
<th>%</th>
<th>2014</th>
<th>%</th>
</tr>
</thead>
</table>

Total cost of office supplies  

Total cost of communications  

---
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Support student cost of rural rotations**

There may be additional expenses related to supporting students during their clinical rotation to a rural, remote or underserved area during their health professional studies.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length of clinical rotation, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of students that will require support to participate in rural clinical rotations per year.

d. Enter (in your selected currency) the travel allowance per student.

e. Enter (in your selected currency) the accommodation allowance for lodging per student.

f. Enter any other costs that may be related to supporting the cost for students to participate in rural rotations in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Training for mentors and supervisors during rotation**

To calculate the costs of training mentors and supervisors during clinical rotations in rural, remote, or underserved areas during health professional studies.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
c. Enter the estimated number of sessions that will be conducted for the purpose of training mentors and supervisors to better interact with students during their clinical rotations in rural, remote or underserved areas.

d. Enter the estimated number of participants and facilitators per session for trainings on mentoring/supervision for rural clinical rotations per year.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated **aggregate** costs for tea or lunch breaks per training session.

j. Enter the estimated **aggregate** costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to design your own A3 interventions that could contribute to supporting clinical rotations in rural areas during health professional studies.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter any other costs related to additional activities to achieve recruiting more students from rural, remote, or underserved backgrounds in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
A4. Curricula that Reflect Rural Health Issues

**Match curricula with rural health needs** - Revise undergraduate and postgraduate curricula to include rural health topics so as to enhance the competencies of health professionals working in rural areas, and thereby increase their job satisfaction and retention.

Existing evidence in support of this recommendation is generally lacking, particularly in developing countries and for disciplines other than medicine. However, there is evidence that education with a primary care focus or a generalist perspective is conducive to producing practitioners willing and able to work in rural areas. This is because most rural health workers are generalists or primary care practitioners. In addition, some studies suggest that advanced procedural skills training (e.g. in obstetrics, emergency medicine, anesthesia and surgery) can enhance the confidence of family medicine residents and equip them with the requisite skills for rural practice. This is because rural practitioners often lack specialist support and have a wider scope of practice.

Practicing in rural areas is associated with three factors: a rural background; positive clinical and educational experiences in rural settings during undergraduate education; and targeted training for rural practice at the postgraduate level. However, the individual effects of each of these factors on improved retention are difficult to estimate, because of many confounders.

Although there is no direct evidence that curricula changes improve rural retention, ample supportive evidence shows that rurally oriented curricula equip young students with the skills and competencies necessary to practice in those areas. For example, a small-scale study in Australia was able to show that when comparing mean percentages of fifth-year exam results, students from the rural curriculum course gained better results than the urban-based medical curriculum in several disciplines related to general practice, such as internal medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry and clinical examination.

The practice of health workers in rural areas is quite different from their urban counterparts, in the way they need to conduct the clinical assessment and management without sophisticated tools and equipment, and the way they need to collaborate with rural communities and manage the rural context. Therefore, educating students in large teaching hospitals is unlikely to equip them with the necessary skills and competencies to adequately address the health needs and the conditions of practice in rural areas.

Curriculum review and renewal on an ongoing basis are needed, though the process can be time consuming. It is also important to ensure that the rural context is reflected in educational content. In addition, generalist or primary care focused curricula should include sufficient exposure to relevant specialist knowledge in order to prepare practitioners with a wider scope of practice that is often required in rural areas. More studies are needed on the direct effects of curricula changes on the retention of health workers, and particularly in relation to non-physicians.

- excerpt from the [WHO Global Policy Recommendations, 2010](https://www.who.int/medicinedebate/2010/)

**Development of rural health curricula**

To calculate the costs of establishing a curriculum that focuses on the quality and relevance of competencies and skills for health professionals so that they are well-prepared to work in rural, remote, or underserved areas.

**To complete information entry for this intervention activity:**

1. Describe the intervention activity (geographic location, length and type of curricula, etc.)
2. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.
c. Enter the estimated number of workdays that will be required for consultations and revisions for the purpose of developing a rural health curricula.

d. Enter (in your selected currency) the daily cost for consultants or staff to conduct rural health curricula consultations or revisions.

e. Enter the estimated number of participants for a workshop to review and/or finalize a rural health curriculum plan or policy.

f. Enter (in your selected currency) the estimated travel and per diem costs per participant.

g. Enter (in your selected currency) the estimated venue, tea and lunch costs per session for each participant and for each facilitator.

h. Enter (in your selected currency) the estimated cost of any other workshop materials or expenses per participant.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Disseminate new materials to instructors/trainers

To calculate the costs of distributing new materials to health professional instructors or trainers as part of the implementation of a new rural health-focused curriculum.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of session, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of sessions that will be conducted for the purpose of training mentors and supervisors to better interact with students during their clinical rotations in rural, remote or underserved areas.

d. Enter the estimated number of participants and facilitators per session for trainings on mentoring/supervision for rural clinical rotations per year.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.


g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](image) or ![Remove Other Cost](image).

Once completed, click ![Save Intervention Activity](image).
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Develop new training/education materials**

To calculate the estimated costs associated with the preparation of new training materials for a rural health curricula.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of materials, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of workdays that will be required for developing training materials as part of developing rural health curricula.

d. Enter (in your selected currency) the daily cost for consultants or staff to develop training materials for rural health curricula.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to design your own A4 interventions that could contribute to developing, implementing or evaluating curricula that address rural health issues for health professional courses of study.
To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities to contribute to the development of a rural health curricula in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

A5. Continuous Professional Development for Rural Health Workers

Facilitate professional development - Design continuing education and professional development programs that meet the needs of rural health workers and that are accessible from where they live and work, so as to support their retention.

Access to continuing education and professional development is necessary to maintain competence and improve performance of health workers everywhere. However, it may be difficult for health workers in rural areas to access these programs if it requires travelling to urban locations.
There is limited direct evidence on the effect of continuing education programs on retention. But there is ample supportive evidence that if delivered in rural areas, and if focused on the expressed needs of rural health workers, these programs are likely to improve the competence of rural health workers, make them feel like they are a part of a professional group, and increase their desire to remain and practice in those areas.

As for the previous interventions, better results are more likely with a combination of interventions. To be successful, continuing education needs to be linked to career paths (D4), as well as with other education interventions. Continuing education should be viewed from a broader perspective.

Such activities are not only for knowledge acquisition or skills development, they also provide opportunities for rural health workers to interact with other practitioners and to maintain professional networks and social contacts, which may help reduce the sense of social or professional isolation.

Distance learning by means of information and communication technologies should be used, where appropriate and available, in order to bring continuing education programmes to more remote locations.

- excerpt from the WHO Global Policy Recommendations, 2010

Design new education programs for professional development

To calculate the costs associated with designing education programs for the continuing professional development of health workers.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of program, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of workdays that will be required for designing a continuing professional development educational program.

d. Enter (in your selected currency) the daily cost for consultants or staff to conduct educational program development consultations or revisions.

e. Enter the estimated number of participants for a workshop to review and/or finalize a continuing professional development educational program.

f. Enter (in your selected currency) the estimated travel and per diem costs per participant.

g. Enter (in your selected currency) the estimated venue, tea and lunch costs per session for each participant and for each facilitator.

h. Enter (in your selected currency) the estimated cost of any other workshop materials or expenses per participant.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct professional development programs**

To calculate the costs of implementing continuous professional development programs to health workers to improve service delivery through the quality and relevance of their skills for responding to population health needs in rural, remote and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of program, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the estimated number of sessions that will be conducted for the purpose of conducting continuous professional programs targeted to improve service delivery in rural, remote or underserved areas.

d. Enter the estimated number of participants and facilitators per session for continuing professional development programs.
e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [ Cancel ]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Support health workers to attend existing training programs (at universities/colleges)

To calculate the cost of supporting health workers so that they may attend additional training programs at universities or colleges in order to improve service delivery in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of training program, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of students that will require support to attend and existing continuing professional development training program.

d. Enter (in your selected currency) the annual tuition costs per student.

e. Enter (in your selected currency) the annual travel allowance per student.

f. Enter (in your selected currency) the annual accommodation allowance for lodging per student.

g. Enter any other costs that may be related to supporting the cost for students to participate in continuous professional development through existing training programs in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to design your own A5 interventions that could support the development, implementation or evaluation or continuous professional development activities for rural health workers.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for the development, implementation or evaluation or continuous professional development activities for health workers in rural, remote or underserved areas in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**B. Regulatory Interventions**

Regulatory measures can be defined broadly to encompass any government control exercised through legislative, administrative, legal or policy tools. Regulatory measures range from parliamentary laws/statutes to state regulations, policies and guidelines developed by line ministries, and program guidance. With regard to recruitment and retention in rural areas, the interventions that require regulatory measures are related to expanding the scope of practice of rural health workers, producing different types of health workers, compulsory service requirements and bonding schemes. (WHO, 2010)

**B1. Enhanced Scope of Practice**

Create the conditions for rural health workers to do more - Introduce and regulate enhanced scopes of practice in rural and remote areas to increase the potential for job satisfaction, thereby assisting recruitment and retention.

Health workers serving rural and remote communities may often have to provide services beyond the remit of their formal training, because of the absence of other more qualified health workers. In some instances this de facto enhanced scope of practice is recognized through regulatory measures (decrees, etc.) that allow certain categories of health workers to provide tasks that are beyond their training, on the assumption that this will increase access to health services for remote and rural populations.
Whether or not this expanded scope of practice has actually contributed to retention of health workers is unclear from the current evidence. There is however evidence to show that enhanced scope of practice can lead to increased job satisfaction. For example, a control study in Australia found that enrolled nurses who were allowed to prescribe reported higher levels of job satisfaction than non-medication endorsed nurses.

There is also compelling evidence that quality of care is not diminished when delivered by health workers with enhanced scope of practice. Indeed, one systematic review found six randomized controlled trials showing that “quality of care was in some ways better for nurse practitioner consultations” when compared with physicians, although in non-rural settings. In addition, patients reported higher levels of satisfaction with nurse practitioners.

Health workers with an enhanced scope of practice can provide vital health-service delivery particularly in areas with an absolute shortage of health workers. For example, while efforts are made towards scaling-up the production of physicians, nurse practitioners and mid-level workers can be used to provide some of the services in the absence of physicians.

Ministries of health need to work with regulatory bodies, professional associations and other stakeholders in order to clearly stipulate the boundaries and guidelines for expanded scopes of practices. There may be considerable resistance from certain groups of health workers, and their concerns and arguments need to be voiced and carefully considered as part of this process. B1 is often bundled with B2 (different types of health workers).

Combining this recommendation with D6 will help ensure that all those working with an expanded scope of practice are recognized for the contribution and service they are delivering in remote and rural areas. Finally, the attractiveness of relocating to a remote and rural area is likely to increase if the post includes access to further education and training (A5) and financial incentives (C1).

While it has been acknowledged that health workers with enhanced scopes of practice can contribute effectively to health-service delivery in remote and rural areas, more evidence is needed to understand whether these health workers are more likely to be retained in these areas. In addition, little is known about the type of package that is required to recruit and retain health workers with enhanced scopes of practice.

-excerpt from the WHO Global Policy Recommendations, 2010

Design of enhanced scope of practice

This activity is configured to allow the user to budget the costs of designing enhanced practices for health workers in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of workdays that will be required for designing an enhanced scope of work.

d. Enter (in your selected currency) the daily cost for consultants or staff to conduct consultations on a proposed enhanced scope of work.

e. Enter the estimated number of participants for a workshop to review a finalized enhanced scope of work.

f. Enter (in your selected currency) the estimated travel and per diem costs per participant.

g. Enter (in your selected currency) the estimated venue, tea and lunch costs per session for each participant and for each facilitator.
h. Enter (in your selected currency) the estimated cost of any other workshop materials or expenses per participant.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Develop training for health workers to enhance scope of practice**

To calculate the cost of preparing training materials for a teaching health workers about their enhanced scope of practice for working in rural, remote and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of workdays that will be required for preparing a curriculum, drafting and/or revising training materials for an enhanced scope of work.

d. Enter (in your selected currency) the daily cost for consultants or staff to prepare curriculum and materials for an enhanced scope of work.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Conduct training for health workers to enhance scope of practice

To calculate the costs associated with conducting trainings for health workers on their enhanced scope of practice for improving service delivery in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of training sessions that will be conducted for health workers on their enhanced scope of practice.

d. Enter the estimated number of participants and facilitators per training session.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Training for supervisors to support enhanced scope

To calculate the costs of training supervisors about health workers’ enhanced scope of practice for improving service delivery in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of training sessions that will be conducted for health workers on their enhanced scope of practice.

d. Enter the estimated number of participants and facilitators per training session.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Other activities

This section allows you to design your own B1 interventions that could support the development, implementation or evaluation for an enhanced scope of practice for health workers in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for the development, implementation or evaluation or continuous professional development activities for health workers in rural, remote or underserved areas in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

B2. Different Types of Health Workers

Train more health workers faster to meet rural health needs - Introduce different types of health workers with appropriate training and regulation for rural practice in order to increase the number of health workers practising in rural and remote areas.
Different types of health workers are being used in many countries in order to meet population health needs in remote and rural areas. For example, a recent survey of sub-Saharan African countries found non-physician clinicians were active in 25 out of the 37 countries investigated and concluded: “Low training costs, reduced training duration, and success in rural placements suggest that non-physician clinicians could have substantial roles in the scale-up of health workforces”.

There is convincing evidence to support the fact that different types of health workers can lead to improved health outcomes. Many countries heavily rely on clinical officers, health assistants and other types of health workers to provide health care in remote and rural areas. The following paragraph highlights the findings from one of the few studies investigating the retention of such workers.

“Técnicos de cirurgia” in Mozambique

Mozambique began to educate and train assistant medical officers with surgical skills called “técnicos de cirurgia” in 1987. Twenty years later, a study found that 88% of all the “técnicos” who graduated in 1987, 1988 and 1996 were still working in district hospitals, compared with only 7% of medical officers who were originally assigned to district hospitals after graduation. Considering that these “técnicos” perform 92% of all major obstetrical surgical interventions in rural hospitals, the authors argue that provision of emergency obstetric care in these areas would be “impossible” without them.

One rationale behind creating different cadres of health workers for remote and rural areas is that their skills and qualifications may be less marketable than those of highly-trained health workers, who are also in demand in urban settings, or even outside the country. Another reason for embracing this policy is that specific types of health workers can be trained to be more receptive and reactive to local health needs, provided that quality and safety issues are also taken into account.

In addition, types of health workers that can be trained in a relatively short period of time may be a more financially viable option in low-resource settings. For increased recruitment and retention, it is important to consider the use of financial incentives (C1) and recognition measures for these cadres (D6).

Although different types of health workers are being used in many countries, more research is needed to understand their retention in remote and rural areas, particularly in comparison with other, more traditional health cadres, such as physicians. Additionally, more sound evidence is required on the intentions and factors motivating mid-level cadres in comparison with higher trained health workers.

- excerpt from the WHO Global Policy Recommendations, 2010

Conduct stakeholder consultations regarding new cadres

To calculate the costs associated with stakeholder (i.e. policy makers, representatives from health profession education institutions, public and private sector actors in health service delivery, professional associations and networks, health workers, civil society) consultations to determine if there is adequate need to develop a new health worker cadre in order to improve service delivery in rural, remote and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of consultation, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of workdays that will be required for consulting stakeholders about new health worker cadre needs.
d. Enter (in your selected currency) the daily cost for consultants or staff to consult stakeholders about new health worker cadre needs.

e. Enter the estimated number of participants for a workshop to review and/or finalize defined new health worker cadre needs.

f. Enter (in your selected currency) the estimated travel and per diem costs per participant.

g. Enter (in your selected currency) the estimated venue, tea and lunch costs per session for each participant.

h. Enter (in your selected currency) the estimated cost of any other workshop materials or expenses per participant.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Develop new cadre proposal and plan roll-out**

If you decide to develop a new health worker cadre, to calculate the costs associated with developing and implementing a plan to roll out the cadre, including conducting consultations to prepare a detailed cadre proposal and a workshop to review the possible new health worker cadre roll-out plan.
To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of consultation, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of days required to define the new cadre scope of practice.

d. Enter the estimated number of days required to define the new cadre placement plans.

e. Enter the estimated number of days required to define the new cadre pre-qualifications.

f. Enter the estimated number of days required to define the new cadre training curriculum.

g. Enter the estimated number of other days required for consultations or new cadre proposal development.

h. Enter (in your selected currency) the daily fee for a consultant or staff to conduct consultations and develop a new cadre proposal.

i. Enter the estimated number of participants for a workshop to review possible new health worker cadres.

j. Enter (in your selected currency) the estimated travel and per diem costs per participant.

k. Enter (in your selected currency) the estimated venue, tea and lunch costs per session for each participant.

l. Enter (in your selected currency) the estimated cost of any other workshop materials or expenses per participant.
Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Design training for new cadre**

To calculate the costs associated with designing training programs for new health worker cadres to contribute to improved service delivery in rural, remote and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
c. Enter the estimated number of workdays that will be required for designing the curriculum, drafting and revising training materials for a new health worker cadre.

d. Enter (in your selected currency) the daily cost for consultants or staff to design the training for the new health worker cadre.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct training to develop new cadre (government-led training)**

To calculate the costs associated with conducting government-led trainings for a new health worker cadre.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the estimated number of training sessions that will be conducted.

d. Enter the estimated number of participants and facilitators per training session.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.
h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated \textit{aggregate} costs for tea or lunch breaks per training session.

j. Enter the estimated \textit{aggregate} costs for venue rental per training session.

k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the \textbf{Other Costs} section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking \textit{Add Other Cost} or \textit{Remove Other Cost}.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide support during education (at university or training center)**

To design interventions that provide support the training of a new or different types of health worker while they are learning at a university or training center.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the estimated number of students that will be trained each year.

d. Enter (in your selected currency) the estimated tuition cost for the program of study.

e. Enter (in your selected currency) the estimated housing cost per student.

f. Enter (in your selected currency) the estimated stipend that will be provided per student.

g. Enter in your selected currency) any other costs (per student) related to education support that will be provided during their program training.

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<th>B2 Intervention Activity: Provide support during education (at university or training center)</th>
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Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking \textcolor{green}{\textbf{Add Other Cost}} or \textcolor{red}{\textbf{Remove Other Cost}}.

Once completed, click \textcolor{green}{\textbf{Save Intervention Activity}}.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click \textcolor{red}{\textbf{Cancel}}. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

\textbf{Training for supervisors to support new cadre}

To project the estimated cost of training supervisors to support the new health worker cadre who will work in rural, remote, or underserved areas.

\textit{To complete information entry for this intervention activity:}

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in \textbf{Step 2}.

c. Enter the estimated number of training sessions that will be conducted.

d. Enter the estimated number of participants and facilitators per training session.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.
k. Enter any other costs that may be related to supporting mentor/supervision trainings for clinical rural rotations in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click \[\text{Cancel}\]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to design your own B2 interventions that could support the introduction, training, scale up, support or evaluation of new cadres of health workers who will work in rural, remote, or underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for the development, implementation or evaluation or continuous professional development activities for health workers in rural, remote or underserved areas in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**. Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click \[\text{Cancel}\]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
B3. Compulsory Service

Make the most of compulsory service - Ensure compulsory service requirements in rural and remote areas are accompanied with appropriate support and incentives so as to increase recruitment and subsequent retention of health professionals in these areas.

Compulsory service is understood as the mandatory deployment of health workers in remote or rural areas for a certain period of time, with the aim to ensure availability of services in these areas. It can be either imposed by the government (for positions that are under government employment), or linked to various other policies. For example, it can be a mandatory requirement to serve for a certain period of time in remote areas before obtaining the license to practice; or it can be a prerequisite before applying for a specialization or for career advancement.

A comprehensive review of compulsory service schemes undertaken as part of the development of these recommendations found that approximately 70 countries have previously used or are currently using compulsory service. The duration varies from country to country, from a minimum of one year to a maximum of nine years, and the policies have included almost all types of health workers.

Despite the popularity of compulsory service, very few evaluations have been conducted in relation to the retention of health workers either during or post their obligated service period. Studies in Ecuador and South Africa reveal that although physicians raised serious complaints over the management of their compulsory service scheme, they did feel that the experience improved their competencies and had been rewarding overall. In some countries, remote and rural areas are reliant upon graduates who are complying with their compulsory service obligations. In Thailand, 28 years after the implementation of a national compulsory service strategy, 49.5% of doctors in rural district hospitals were new graduates, presumably completing their compulsory service requirements.

Even if only for a limited period of time, health workers completing their compulsory service requirements can significantly increase the availability of health workers in underserved areas. Furthermore, compulsory service periods in remote and rural areas can increase health workers’ appreciation for rural health issues, prove a valuable learning experience, and provide an opportunity to make a difference to the health of people living in underserved and disadvantaged communities.

However, there are notable challenges and risks to implementing a compulsory service requirement for health workers. In the Indian state of Kerala, for example, large and sustained strikes were organized in protest of a new three year compulsory service for medical graduates. Compulsory service can also be criticized for increasing turnover in health centres, and therefore potentially decreasing the quality of care delivered.

Support and management systems need to be in place to ensure the successful implementation of compulsory service, and participants need to be appropriately prepared prior to their compulsory service in order to be able to provide the expected standard of care.

Combining compulsory service with other types of incentives (A5 and C1) and with efforts to improve the working and living environment of the locations (D1 and D2) is likely to yield better results. As previously alluded to, more evaluations are required to understand the retention of health workers in remote and rural areas following the completion of their obligatory service period. Furthermore, research is required to evaluate compulsory service schemes for health workers other than physicians.

- excerpt from the WHO Global Policy Recommendations, 2010

Develop compulsory service policy

Ensure rural retention policies are part of the national health plan
This is about the principles of alignment and policy coherence at the country level. Rural retention policies must be grounded in a costed and validated national health plan. A national health plan provides the framework for holding all partners accountable for producing tangible and measurable results; it is at the heart of health development that is country-led, country-owned, and fully aligned with national priorities and capacities.

A national health workforce plan, which is an integral part of a country’s national health plan, sets out the projected numbers and types of health workers needed in the future, the policies and strategies to scale up needed health workers, the strategies to retain and motivate them, and the costs of implementing all the required interventions.

Given that the ultimate goal is to improve health outcomes, it is essential that policy interventions and plans for producing and allocating the most appropriate types of health workers are developed to respond to the health needs, perceptions, expectations and health-seeking behaviors of people living in rural and remote communities.

Any retention strategy should be linked to the broader national and local health system structures and functions, to take advantage of synergies and increase efficiencies. For example, if a country has a national health plan and health sector reforms are under way, there may be an opportunity to prioritize the upgrading of rural health facilities and improve the working environment as part of a national health facility expansion plan. In contrast, a plan to expand public- or private-funded health services in urban areas may work against new strategies for attracting people to work in rural areas.

- excerpt from the WHO Global Policy Recommendations, 2010

To estimate the costs associated with developing a policy that mandates health workers to serve for a defined period of time in a rural, remote, or underserved area.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day (in your selected currency) for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Train mentors/supervisors**

To estimate the costs associated with trainings of health worker mentors and supervisors about the compulsory rural service policies.

*To complete information entry for this intervention activity:*  
  
  a. Describe the intervention activity (geographic location, length and type of training, etc.)  
  
  b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.  
  
  c. Enter the estimated number of sessions that will be conducted for the purpose of training mentors and supervisors to better interact with students during their clinical rotations in rural, remote or underserved areas.  
  
  d. Enter the estimated number of participants and facilitators per session for trainings on mentoring/supervision for rural clinical rotations per year.  
  
  e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.
f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to supporting the development of a compulsory service policy in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking "Add Other Cost" or "Remove Other Cost".

Once completed, click "Save Intervention Activity".

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click "Cancel". You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Provide support (housing, stipend, other) during compulsory service

To calculate the costs associated with supporting health workers through various non-financial incentives and support interventions during their compulsory service in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of health workers that will undergo compulsory service for each year in your costing timeframe.

d. Enter (in your selected currency) the estimated housing support cost per health worker.

e. Enter (in your selected currency) the estimated stipend that will be provided per health worker.

f. Enter (in your selected currency) any other support costs (per health worker) that will be provided during their compulsory service.

g. Enter any other costs that may be related to supporting the development of a compulsory service policy in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking "Add Other Cost" or "Remove Other Cost".

Once completed, click "Save Intervention Activity".

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click "Cancel". You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide relocation support at end of service**

To calculate the costs associated with offering assistance to health workers to relocate at the end of their compulsory service assignments in rural, remote, and underserved areas. If you wish to provide relocation support at the beginning of compulsory service, you may either combine costs or enter this as an additional activity.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of health workers that will undergo compulsory service for each year in your costing timeframe.
d. Enter (in your selected currency) the estimated relocation support cost per health worker.

e. Enter any other costs that may be related to health worker relocation support in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct compliance monitoring**

To calculate the costs associated with conducting compliance monitoring for health worker compulsory service.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
a. Enter the amount (in your selected currency) for the manager of the selected cadre’s monthly salary.

b. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the manager works full-time to conduct compliance monitoring, then enter 100%.

c. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.

d. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the support staff works full-time to conduct compliance monitoring, then enter 100%.

e. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

f. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity for each year. If the other staff works full-time to conduct compliance monitoring, then enter 100%.

g. Enter the cost of any office supplies and communications related to conducting compliance monitoring.

h. Enter any other costs that may be related to conducting compliance monitoring.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide ongoing management of program**

To calculate the costs associated with providing ongoing management of the health worker compulsory service program.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

a. Enter the amount (in your selected currency) for the manager of the selected cadre’s monthly salary.

b. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the manager works full-time to provide compulsory service program management, then enter 100%.

c. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.

d. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the support staff works full-time to provide compulsory service program management, then enter 100%.

e. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

f. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity for each year. If the other staff works full-time to provide compulsory service program management, then enter 100%.

g. Enter the cost of any office supplies and communications related to providing compulsory service program management.

h. Enter any other costs that may be related to provide compulsory service program management.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking \[ \text{Add Other Cost} \] or \[ \text{Remove Other Cost} \].

Once completed, click \[ \text{Save Intervention Activity} \].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click \[ \text{Cancel} \]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to design your own B3 interventions that could support any other interventions that could support the development, implementation, or management of compulsory service programs for health workers in rural, remote, or underserved areas.

**To complete information entry for this intervention activity:**
a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for the development, implementation or evaluation of a compulsory service policy for health workers in rural, remote or underserved areas in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

B4. Subsidized Education for Return of Service

**Tie education subsidies to mandatory placements** - Provide scholarships, bursaries or other education subsidies with enforceable agreements of return of service in rural or remote areas to increase recruitment of health workers in these areas.

Many governments offer students in the health professions scholarships, bursaries, stipends or other forms of subsidies to cover the costs of their education and training and in return students agree to work in a remote or rural area for a certain number years after they become a qualified health worker.

A systematic review analyzed the effectiveness of financial incentives given in return for medical service in rural areas. It included 43 studies, of which 34 evaluated programs based in the USA, while the rest examined programs from Canada, Japan, New Zealand and South Africa. In these programs, future health workers (i.e. students), or
practicing health workers enter into a contract whereby they receive some sort of financial incentive (either scholarships for their education, or loans to payback their education, or direct financial incentives), and in exchange they commit to serve in a rural area for a certain period of time. Usually this intervention is combined with other types of retention strategies, such as recruitment of students from rural backgrounds or training in a rurally located school (see Slide 4 on Japan’s “Home Prefecture” recruiting scheme”).

These types of bonding schemes were linked to impressive retention rates in 18 studies: the proportion of participants who remained in the underserved area after completing their obligated period of service ranged from 12% to 90%. Yet numerous studies included in this systematic review had serious methodological flaws and therefore these findings should be interpreted with some caution.

Bonding schemes appear to be successful in placing significant numbers of health workers in rural areas, and some even appear effective in ensuring that program participants will continue to work in other underserved areas after completing their obligatory service. However, as many offer a “buy-out” option, further information is required to understand how popular this option is in comparison with completing the compulsory service.

As with other recommendations, positive outcomes are more likely if these return-of-service agreements are combined with other interventions. For example, combining these incentives with targeted admissions (A1) is likely to have a larger effect.

Further evidence is required on education subsidies in return of service for nursing students and other types of health professional students. More needs to be known about the characteristics of students who commit to return-of-service agreements and why some graduates choose the “buy-out” option rather than completing their service. More cohort studies should be conducted to compare the retention rates of health workers who have completed their return of service with those who graduated without being part of a bonding scheme.

Home prefecture recruiting scheme, Jichi Medical University, Japan

The Jichi Medical University (JMU) in Japan began a new and unique «home prefecture recruiting scheme» in 1972 with the aim to produce rural doctors and distribute them nationwide. Students who attend JMU are fully funded by their prefecture government to study medicine and they sign a contract bonding them to working in their home prefecture medical institutions for nine years post-graduation, with five to six years of this obligation spent in rural dispatch areas chosen by their home prefecture. If a contract is breached all medical school expenses must be paid in one lump sum.

In one part of a well-designed retrospective cohort study, 1477 graduates from JMU were surveyed in 2000, 2004 and 2006. There was a 95% completion rate and on average, 69.8% of JMU graduates remained in their home prefectures for at least six years after their obligatory service. Interestingly, if settlement is defined as being in a home prefecture for at least one out of the three time points, the settlement rate of post-obligation JMU graduates rises to 76.3%.

- excerpt from the WHO Global Policy Recommendations, 2010

Design subsidized education policy

Ensure rural retention policies are part of the national health plan

This is about the principles of alignment and policy coherence at the country level. Rural retention policies must be grounded in a costed and validated national health plan. A national health plan provides the framework for holding all partners accountable for producing tangible and measurable results; it is at the heart of health development that is country-led, country-owned, and fully aligned with national priorities and capacities.

A national health workforce plan, which is an integral part of a country’s national health plan, sets out the projected numbers and types of health workers needed in the future, the policies and strategies to scale up needed health workers, the strategies to retain and motivate them, and the costs of implementing all the required interventions.
Given that the ultimate goal is to improve health outcomes, it is essential that policy interventions and plans for producing and allocating the most appropriate types of health workers are developed to respond to the health needs, perceptions, expectations and health-seeking behaviors of people living in rural and remote communities.

Any retention strategy should be linked to the broader national and local health system structures and functions, to take advantage of synergies and increase efficiencies. For example, if a country has a national health plan and health sector reforms are under way, there may be an opportunity to prioritize the upgrading of rural health facilities and improve the working environment as part of a national health facility expansion plan. In contrast, a plan to expand public- or private-funded health services in urban areas may work against new strategies for attracting people to work in rural areas.

- excerpt from the WHO Global Policy Recommendations, 2010

To calculate the costs associated with the development of a subsidized education policy to help finance the health workers who will serve in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day (in your selected currency) for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.

e. Enter any other anticipated costs that are related to developing a rural recruitment plan.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide tuition and other subsidies**

If your education subsidy for return of service program includes providing tuition for health workers, you would include those details here.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the estimated number of students that will receive tuition or other subsidies under the education policy per year.

d. Enter the amount (in your selected currency) of the tuition subsidy per student.

e. Enter the amount (in your selected currency) of the accommodation allowance per student.

f. Enter any other costs associated with providing tuition or other educational subsidy to students in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct compliance monitoring**

To calculate the costs associated with conducting compliance monitoring for the subsidized educational policy to support the training of health workers who will work in rural, remote, or underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

a. Enter the number of trips to be conducted per year.

b. Enter the number of travelers per trip to be conducted per year.

c. Enter (in your selected currency) the estimated travel and transport costs per person per trip.

d. Enter (in your selected currency) the estimated lodging and per diem costs per person per trip.

e. Enter the cost per person per trip (i.e. materials) for any other expenses related to conducting compliance monitoring.

f. Enter any other costs that may be related to conducting compliance monitoring.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide ongoing management of program**

To calculate the cost of providing ongoing management of the subsidized education program.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the amount (in your selected currency) for the manager of the selected cadre’s monthly salary.
b. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the manager works full-time to provide educational subsidy program management, then enter 100%.

c. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.

d. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity for each year. If the support staff works full-time to provide educational subsidy program management, then enter 100%.

e. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

f. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity for each year. If the other staff works full-time to provide educational subsidy program management, then enter 100%.

g. Enter the cost of any office supplies and communications related to providing educational subsidy program management.

h. Enter any other costs that may be related to provide educational subsidy program management.

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<tr>
<th>Activity Description (?</th>
<th>Caderes Targeted by Activity (?)</th>
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<tbody>
<tr>
<td></td>
<td>Doctors</td>
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<td>Midwives</td>
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<td></td>
<td>Nurses</td>
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<table>
<thead>
<tr>
<th>Base Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager’s salary (per month)</td>
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<tr>
<td>Manager time (100% if full-time)</td>
</tr>
<tr>
<td>Support staff’s salary (per month)</td>
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<tr>
<td>Support staff time (100% if full-time)</td>
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<tr>
<td>Other staff’s salary (per month)</td>
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<tr>
<td>Other staff time (100% if full-time)</td>
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<tr>
<td>Total cost of office supplies</td>
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<td>Total cost of communications</td>
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<tr>
<th>Other Costs</th>
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<tr>
<td>Specify item name (?)</td>
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<tr>
<td>Total cost (?)</td>
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</tbody>
</table>
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Other activities

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, or management of subsidized education service programs for health workers in exchange for their service to rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for the development, implementation or evaluation of a compulsory service policy for health workers in rural, remote or underserved areas in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.
Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

C. Financial Incentive Interventions

Make it worthwhile to move to a remote or rural area - Use a combination of fiscally sustainable financial incentives such as hardship allowances, grants for housing, free transportation, paid vacations, etc., sufficient enough to outweigh the opportunity costs associated with working in rural areas, as perceived by health workers, to improve rural retention.

Several studies point to salaries and allowances as two of the key factors that influence health workers’ decisions to stay in or leave a rural workplace. Financial incentives are widely used to recruit and retain health workers in remote and rural positions, and can be implemented relatively quickly. Yet well-designed and comprehensive evaluations of the effectiveness of financial incentives are rare, and the evidence that is available suggests mixed results.

In Australia, for example, financial incentives were set up for long-serving physicians in remote and rural areas and the amount paid varied according to location and length of service. One of these incentive plans succeeded in achieving a 65% retention rate of physicians after five years.

In the Niger, financial incentives were responsible for increasing the percentage of physicians, pharmacists and dentists working outside the capital, Niamey. But two years after implementation, the proportion of health workers choosing to go to these areas had not changed significantly (from 42% at the start to 46% after two years).

Other studies have shown positive effects of financial incentives on increased attractiveness of rural areas. A survey in South Africa found that 28% to 35% of rural health workers who received the rural allowance believed it affected their career plans for the next year. A mid-term review of the Zambian Health Workers Retention Scheme found that within two years of implementation, the scheme had been able to attract and retain more than 50 doctors in rural areas, some to areas where there were previously no doctors available.

Prior to implementing financial incentives, significant work needs to be done to fully understand the opportunity costs of working in remote and rural areas as the incentives need to be carefully matched to the demands and expectations of health workers. Feasibility studies, such as discrete choice experiments and a labor market analysis, are essential to inform the design of a financial incentives scheme.

Policy-makers need to be aware of potential sensitivities surrounding giving health workers specific financial incentives and the problems this may cause between them and other civil servants (if in a civil-service system) or those health workers not covered under the scheme. For example, the rural ranking scale in New Zealand caused serious discord between physicians over the definition of “rural”. Some felt they had been unfairly categorized and some even claimed they had been financially disadvantaged under the new payment system.

A financial incentive scheme will be more cost effective in countries with a significant surplus of health workers in major cities because underemployed or unemployed health workers could be attracted to rural areas at a lower social cost than already employed health workers.

For example, providing incentives can have different results in different contexts: in the Niger, the shortage of physicians made it nearly impossible to use incentive payments as a trigger for physicians to relocate in rural areas as the urban market offered sufficient space for private practice and incomes were much higher.

This is in contrast to Mali, where an oversupply of medical doctors made it attractive for unemployed young doctors to practise in rural areas when offered incentives to relocate. The differences in results of payment of incentives demonstrate the importance of including the labour market in the situational analysis.
The effectiveness of financial incentives could be greater if combined with other interventions, particularly targeting these at students and health workers with a rural background (A1).

Consideration should also be given to combining these with B2 (different types of health workers, B3 (compulsory service), D1 (improved living conditions) and D2 (safe and supportive working environment) to ensure increased recruitment and retention of health workers.

More well-designed and comprehensive evaluations need to be conducted in order to determine the long-term impact of financial incentives on the retention of health workers in remote and rural areas.

- excerpt from the WHO Global Policy Recommendations, 2010

For the purpose of this exercise, financial incentives encompass all benefits paid or provided to health workers to encourage work in rural, remote or underserved areas. These incentives can include monetary bonuses, in-kind benefits (i.e. providing housing or vehicle for the worker to use free of charge), and any other benefits that reduce the hardship associated with working in rural areas (i.e. extra vacation time, training opportunities, or schooling for children).

C1. Appropriate Financial Incentives

Conduct health worker research and consultations regarding financial incentives

To calculate the costs associated with conducting research to develop financial incentives schemes for health workers.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.
Once completed, click **Save Intervention Activity**. If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

### Provide financial incentives

After research has been conducted, use this section to calculate the estimated costs associated with providing financial incentives to health workers providing services in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of service, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of health workers that will receive financial incentives for each year in your costing timeframe.
d. Enter (in your selected currency) the **additional salary or allowances** that will be given per health worker. Do not include the current salary that the health worker is already receiving. You may enter amounts per health worker for: additional salary, a rural hardship allowance, paid vacation, housing allowance, transport allowance, or a performance-based incentive. As the amount for the performance-based incentive will be dependent on the services that the worker performs, this can be an estimate or average.

e. Enter any other costs associated with providing financial incentives in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](image) or ![Remove Other Cost](image). Once completed, click ![Save Intervention Activity](image).

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click ![Cancel](image). You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Other activities

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, scale up or management of providing financial incentives for health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for providing financial incentives in the Other Costs section. This may include administrative, supervision, or management costs.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
D. Professional and Personal Support Interventions

“By definition, rural and remote areas often convey a sense of isolation, both from a professional and personal point of view. It is then no surprise that when asked what matters most in choosing to work in a rural location, students, young graduates and health workers all mention the need for support. This can be perceived on a personal level, where issues related to good infrastructure, opportunities for social interaction, schooling for children and employment for spouses all rank high on the preferences of health workers.

On a professional level, opportunities to advance careers and to communicate and consult with peers through networks, telehealth or other approaches are equally important. For all 30 types of health workers, public recognition of the services they provide to communities goes a long way in improving their morale, status and subsequent desire to work in rural areas.

It is reasonably clear from the evidence and country-specific experience that interventions in this area are complementary and are more likely to augment each other’s’ impact but be ineffective in isolation. A core basic requirement for all of these and previous interventions to be effective will come from developing, deploying and motivating effective local services managers and strengthening human resource management systems.” (WHO, 2010)

D1. Better Living Conditions

Pay attention to living conditions - Improve living conditions for health workers and their families and invest in infrastructure and services (sanitation, electricity, telecommunications, schools etc.) as these factors have a significant influence on a health worker’s decision to locate to and remain in rural areas.

The absence of direct evidence that improving rural health infrastructure and living conditions contributes to increased retention of health workers in rural areas is mainly because few large-scale programs have been implemented. On the other hand, there is ample supportive evidence. In studies that aim to elicit the factors that influence decisions to work in a remote or rural area, the availability of good living conditions is always mentioned as very important. This includes accommodation, roads, electricity, running water, Internet access, schools for children and employment opportunities for spouses.

A study of South African doctors listed better accommodation as one of the three most important factors that would influence them to remain in a rural area. A study in Bangladesh revealed that remoteness and difficult access to health centers were major reasons for health worker absenteeism, while health personnel working in villages or towns with roads and electricity were far less likely to be absent.

Anecdotal data reinforce the results of studies indicating that the lack of appropriate housing, electricity and phone service, and inadequate schools, all act as disincentives for rural service. Given that this intervention is always part of a larger retention package or scheme of so-called “non-financial incentives”, it is difficult to isolate its individual effect on retention.

Improving rural infrastructure is part of the overall economic development of rural and remote areas. It is an investment that, among other things, will help to improve health worker retention and have similarly beneficial effects on workers from other public sectors such as teachers and policemen. It will also create a more attractive environment for private activities in all economic sectors.

- excerpt from the WHO Global Policy Recommendations, 2010
Construct and furnish new staff housing

This section allows users to budget the costs associated with the per unit cost of construction for new staff housing.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the name of the facility or location to be constructed.

d. Enter the estimated construction cost per square meter (m²).

e. Enter the estimated size of the housing unit to be constructed in square meters (m²).

f. Enter the estimated number of units to be constructed for each year of your costing timeframe.

g. Enter costs for furnishing the housing unit, either by:

   i. entering the total amount for equipment / furniture, which assumes that you have already calculated the itemized costs or total budget; or

   ii. entering itemized costs based on the type of equipment, its unit cost, and the number of units required under each tab: Furniture, and Power and Water. To enter itemized costs, select “Yes” from the drop down menu under “Do you want to enter itemized costs?” and you will find categories for each tab. Please note that there are default items (i.e. Beds, Tables, Chairs and Shelves under the Furniture category), but you can also enter your own items using the Other (Specify) field.

h. Enter any other costs related to constructing and furnishing new staff housing in the Other Costs section.
When entering the itemized costs for furniture, enter the unit cost and number of each required:
When entering the itemized costs for power and water, enter the unit cost and number of each required:
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Upgrade electricity in existing accommodations

To calculate the costs associated with upgrading the electricity in existing housing units for health workers in rural, remote, or underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of staff housing units to be upgraded for each year of your costing timeframe.

d. Enter (in your selected currency) the estimated cost to provide a power generator or lighting per housing unit.

e. Enter any other costs associated with upgrading staff housing electricity in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide water in existing accommodations**

To calculate the costs associated with upgrading the water supply in existing housing units for health workers in rural, remote, or underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of staff housing units to be upgraded for each year of your costing timeframe.

d. Enter (in your selected currency) the estimated cost to install a water supply per housing unit.
e. Enter any other costs associated with upgrading staff housing water supply in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Improve telecommunications**

To calculate the costs associated with providing telecommunications for health workers in rural, remote, or underserved areas.

*To complete information entry for this intervention activity:*

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of health workers to benefit from improved telecommunications for each year of your costing timeframe.
d. Enter (in your selected currency) the estimated amount paid to each health worker for cellphone usage (i.e. airtime).

e. Enter (in your selected currency) the estimated amount paid to each health worker for internet access (i.e. airtime, modem, or hours at a cybercafé).

f. Enter any other costs associated with improving health worker telecommunications in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](add-cost.png) or ![Remove Other Cost](remove-cost.png). Once completed, click ![Save Intervention Activity](save-costs.png).

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click ![Cancel](cancel.png). You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Improve schooling for children**

To calculate the costs associated with providing better schooling for children of health workers in rural, remote, or underserved areas.
To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of health workers to benefit from improved schooling opportunities for the children of health workers for each year of your costing timeframe.

d. Enter (in your selected currency) the estimated amount to be paid to each health worker for their children’s schooling (i.e. uniforms, annual tuition fees, books).

e. Enter any other costs associated with providing better schooling for children of health workers in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Conduct regular maintenance/repairs

To calculate the costs associated with regular maintenance and repairs for staff housing for health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter (in your selected currency) the estimated aggregate amount to be reserved for repairing staff housing per year.

d. Enter (in your selected currency) the aggregate cost to maintain staff housing per year.

e. Enter any other costs associated with maintaining or repairing staff housing in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to calculate the costs associated with any other interventions that could support the improvement of living conditions for health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter any other costs related to additional activities for providing better living conditions for health workers in the **Other Costs** section. This may include administrative, supervision, or management costs.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
D2. Safe and Supportive Working Environment

Ensure the workplace is up to an acceptable standard - Provide a good and safe working environment, including appropriate equipment and supplies, supportive supervision and mentoring, in order to make these posts professionally attractive, and thereby increase the recruitment and retention of health workers in remote and rural areas.

To what extent improving the working environment has directly improved retention in rural areas is unclear. However, according to a Cochrane systematic review, “questionnaire-based surveys suggest that professional and personal support may also influence health professionals’ choice to work in underserved areas. Professional development, ongoing training and style of health service management were important factors influencing retention of health professionals in underserved areas”.

Supportive evidence from satisfaction surveys shows that health professionals are disinclined to apply for or accept assignments to practice in facilities that are in a state of disrepair and that do not have basic supplies, such as running water, gloves, elementary basic drugs and rudimentary equipment, because this dysfunctional work environment severely limits their ability to practice what they have been trained to do. In addition, supportive supervision is also a key element that contributes to improved job satisfaction, performance and subsequent retention and practise in rural areas.

Improving working conditions is likely to improve the performance and productivity of health workers, and hence the performance of health systems. But there is a risk that if pilot programs are implemented in just some rural areas of a country, these will attract health workers from other areas, thereby re-enforcing existing imbalances.

In terms of costs, equipping and refurbishing health facilities may be resource-intensive, but benefits can be achieved for a longer period. Likewise, changes in management style and implementing supportive supervision may also require significant investment in management training courses and in effective supervision processes, but long-term benefits can be expected.

Finally, holistic strategies to prevent workplace violence can also be complex and costly, but it is likely they will contribute to improved job satisfaction for the long run.

- excerpt from the WHO Global Policy Recommendations, 2010

Make structural repairs for health facilities

To calculate the costs associated with undertaking of structural repairs for health facilities in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the type of health facility.

d. Enter (in your selected currency) the average cost of health facility repairs per unit.

e. Enter the number of health facility units that will undergo structural repairs for each year of your costing timeframe.
f. Enter any other costs related to additional activities for providing structural repairs to health facilities in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Upgrade/replace equipment in health facilities

To calculate the costs associated with upgrading or replacing equipment for health facilities in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
c. Enter the type of health facility.

d. Enter (in your selected currency) the average cost of equipment per unit.

e. Enter the number of health facility units that will have equipment upgraded or replaced for each year of your costing timeframe.

f. Enter any other costs related to additional activities for upgrading/replacing equipment for health facilities in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Improve medicines and supplies

To calculate the costs associated with improving medical supplies for health facilities in rural, remote, and underserved areas.

To complete information entry for this intervention activity:
a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the type of health facility.

d. Enter (in your selected currency) the average cost to improve the medical supply per unit.

e. Enter the number of health facility units that will benefit from an improved medical supply for each year of your costing timeframe.

f. Enter any other costs related to additional activities for improved medical supply to health facilities in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Train managers to be more supportive

To calculate the costs of training managers to be more supportive to health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of sessions that will be conducted for the purpose of training supervisors to be more supportive.

d. Enter the estimated number of participants and facilitators per session for trainings more supportive supervision per year.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated aggregate costs for tea or lunch breaks per training session.

j. Enter the estimated aggregate costs for venue rental per training session.

k. Enter any other costs that may be related to training supervisors to be more supportive in the Other Costs section.
You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Provide on-site supervision and support

To calculate the costs associated with providing on-site supervision and support to health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of work sites to be visited and the number of travelers per site for each year of your costing timeframe.

d. Enter (in your selected currency) the following costs per person per site: travel and transport, lodging and per diem, and any other costs.

e. Enter the number of facilitators per site who will provide on-site supervision and support for each year of your costing timeframe.

f. Enter the number of days of support to be provided per site for each year of your costing timeframe.

l. Enter (in your selected currency) the facilitator’s fee per day.

m. Enter any other costs that may be related to providing on-site supervision and support in the Other Costs section.
You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct regular maintenance/repairs**

To calculate the costs associated with regular maintenance and repairs to improve the working conditions at health facilities in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, type of vehicle, etc.)

b. etc.
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter (in your selected currency) the estimated **aggregate** amount to be reserved for repairing health facilities per year.

d. Enter (in your selected currency) the **aggregate** cost to maintain health facilities per year.

e. Enter any other costs associated with maintaining or repairing health facilities in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking **Add Other Cost** or **Remove Other Cost**.

Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide transportation support**

To calculate the costs associated with making vehicles or transport available to health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

b. Describe the intervention activity (geographic location, etc).
c. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

d. Enter (in your selected currency) the estimated cost per vehicle (car, truck, motorcycle, bicycle, boat, etc.)

e. Enter (in your selected currency) the estimated annual cost for petrol and regular maintenance per vehicle.

f. Enter the number of years that the vehicle can be used.

g. Enter the number of vehicles to purchase for each year on your costing timeframe.

h. Enter any other costs related to providing better transportation access to health workers in rural, remote, and underserved areas. This could include the design, administration, and evaluation of a health worker transportation program, or any additional vehicle-related expenses, such as insurance, tolls, parking, accident repair, safety equipment, customs costs (if vehicles are procured from outside the country), or taxes.

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**Other activities**

This section allows you to calculate the costs associated with any other interventions that could support the improvement of working conditions for health workers in rural, remote, and underserved areas.

*To complete information entry for this intervention activity:*

a. Describe the intervention activity (geographic location, length or type of activity, etc).
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for providing better living conditions for health workers in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

D3. Outreach Support

**Foster interaction between urban and rural health workers** - Identify and implement appropriate outreach activities to facilitate cooperation between health workers from better served areas and those in underserved areas, and, where feasible, use telehealth to provide additional support to health workers in remote and rural areas.

In addition to improved working conditions and supportive supervision, there is also the possibility to provide outreach support to rural health workers. One form of outreach support is when individual specialists or teams of specialists make regular visits to their rural peers to advise and assist with patient care and their professional development. Another form is telehealth, where distance-based technology is used to help rural health workers diagnose and treat patients and improve their knowledge and skills.

There is no direct evidence that outreach support programs improve rural or remote retention. However, there is ample supportive evidence from observational studies that such programs improve competencies and job satisfaction of rural health workers. They can also contribute to improving local quality of care, reduce the number of consultation visits to specialists and lower the rate of hospital admissions.
Outreach activities can, among other things, reduce feelings of professional isolation. They are likely to be more beneficial in settings where there is a critical shortage of health workers, limited infrastructure or very sparse populations, as it provides a service that otherwise would not be available (e.g. mobile clinics or fly-in services).

Implementing outreach support activities, and particularly telehealth programs, requires significant financial resources, as well as access to the Internet and other technologies. But rapid advances in telecommunications, in particular in the use of mobile phones, offers hope for more rapid and widespread implementation of such programs in the near future.

More studies are needed on the role of telehealth and outreach programs on the retention of health workers.

- excerpt from the WHO Global Policy Recommendations, 2010

Design Outreach Support Program

To calculate the costs associated with conceptualizing and planning activities that will provide outreach support to health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of outreach program, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.

Once completed, click [Save Intervention Activity].
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Support urban health workers to visit rural areas**

To calculate the costs associated with sending urban health workers to visit rural, remote, and underserved areas to provide support and exchange opportunities.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of visit, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of urban health workers to make visits for each year in your costing timeframe.

d. Enter (in your selected currency) the travel and accommodation allowances to be provided for each urban health worker.

e. Enter any other costs related to urban health worker exchange visits to rural, remote, and underserved areas in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Support rural Health Workers to visit urban areas**

To calculate the costs associated with sending health workers from rural, remote, and underserved areas to visit urban areas to receive support and take part in exchange opportunities.

*T o c o m p l e t e i n f o r m a t i o n e n t r y f o r t h i s i n t e r v e n t i o n a c t i v i t y:*

a. Describe the intervention activity (geographic location, length or type of visit, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of rural health workers to make visits for each year in your costing timeframe.

d. Enter (in your selected currency) the travel and accommodation allowances to be provided for each rural health worker.

e. Enter any other costs related to rural health worker exchange visits to urban areas in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide grants to support telehealth networks**

To calculate the costs associated with developing, implementing and managing telehealth networks to support health workers in rural, remote, or underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of health workers to receive telehealth grants for each year of your costing timeframe.

d. Enter (in your selected currency) the estimated grant amount to be awarded per health worker for internet access (i.e. airtime, modem, or hours at a cybercafé) and cellphone usage (i.e. airtime).

e. Enter (in your selected currency) any other grant amount to be paid per health worker.

f. Enter any other costs associated with providing grants to support telehealth networks in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking 

Once completed, click 

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click 

You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Provide ongoing management of program

Ongoing program management can be an important part of effectively implementing outreach support for health workers in rural, remote or underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the amount (in your selected currency) for the manager of the selected cadre’s monthly salary.

d. Enter the manager’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the manager works full-time for ongoing program management, then enter 100%.

e. Enter the amount (in your selected currency) for the supporting staff’s monthly salary.

f. Enter the support staff’s percentage of time worked, i.e. whether s/he is working full- or part-time on this activity. If the support staff works full-time for ongoing program management, then enter 100%.

g. Enter the amount (in your selected currency) for any other staff member’s monthly salary.

h. Enter the percentage of time worked for any other staff involved in on-going management, i.e. whether s/he is working full- or part-time on this activity. If the other staff works full-time for ongoing program management, then enter 100%.

i. Enter the cost of any office supplies and communications related to providing ongoing program management.

j. Enter any other costs that may be related to providing ongoing program management.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, management, or evaluation of outreach support for health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).
b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to additional activities for providing outreach support for health workers in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

D4. Career Development Programs

**Design career ladders for rural health workers** - Develop and support career development programs and provide senior posts in rural areas so that health workers can move up the career path as a result of experience, education and training, without necessarily leaving rural areas.

A career ladder provides a sequence of posts, from the most junior to the most senior, which health workers can climb up as they advance in their jobs. This is particularly relevant in the public sector and civil service where a clear sense of hierarchy is the rule.

There is no direct evidence that setting up career ladders in rural areas can help to retain health workers. However, evidence from surveys shows that clear career prospects are important factors in the choice of health workers to practice or not in a remote or rural area. Career ladders are common in urban and hospital settings, but it is possible to develop clear and specific career paths in rural settings as well. The figure below shows examples of potential steps in career ladders for various health professions.

**Examples of career ladders for health workers**
Develop health worker career development plan or policy

Why should it be ensured that rural retention policies are part of the national health plan?

This is about the principles of alignment and policy coherence at the country level. Rural retention policies must be grounded in a costed and validated national health plan. A national health plan provides the framework for holding all partners accountable for producing tangible and measurable results; it is at the heart of health development that is country-led, country-owned, and fully aligned with national priorities and capacities.

A national health workforce plan, which is an integral part of a country’s national health plan, sets out the projected numbers and types of health workers needed in the future, the policies and strategies to scale up needed health workers, the strategies to retain and motivate them, and the costs of implementing all the required interventions.

Given that the ultimate goal is to improve health outcomes, it is essential that policy interventions and plans for producing and allocating the most appropriate types of health workers are developed to respond to the health needs, perceptions, expectations and health-seeking behaviors of people living in rural and remote communities.

Any retention strategy should be linked to the broader national and local health system structures and functions, to take advantage of synergies and increase efficiencies. For example, if a country has a national health plan and health sector reforms are under way, there may be an opportunity to prioritize the upgrading of rural health facilities and improve the working environment as part of a national health facility expansion plan. In contrast, a plan to expand public- or private-funded health services in urban areas may work against new strategies for attracting people to work in rural areas.

To calculate the costs associated with designing a health worker career development plan or policy to provide advancement opportunities for health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Design education programs to support staff advancement**

To calculate the costs associated with designing health worker continuing professional development and education opportunities that can contribute to advancement opportunities for health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day (in your selected currency) for consultant or staff.
Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Conduct training to support staff advancement**

To calculate the costs associated with designing and implementing training sessions for health workers in rural, remote, and underserved areas in order to provide career advancement opportunities for them.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of sessions that will be conducted to support career advancement for health workers in rural, remote or underserved areas.

d. Enter the estimated number of participants and facilitators per session for staff advancement trainings per year.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.

f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.
i. Enter the estimated **aggregate** costs for tea or lunch breaks per training session.

j. Enter the estimated **aggregate** costs for venue rental per training session.

k. Enter any other costs that may be related to supporting staff advancement trainings in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](image) or ![Remove Other Cost](image).
Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Support health workers to attend existing training**

To calculate the costs associated with sending health workers in rural, remote, and underserved areas to pre-existing trainings in order to provide career advancement opportunities for them.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length and type of training, etc.)

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the estimated number of health workers that will be supported with career advancement training opportunities for each year of your costing timeframe.

d. Enter (in your selected currency) the costs of tuition, travel, accommodation, and any other allowances.

e. Enter any other costs that may be related to supporting health workers to attend trainings for career advancement in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, management, or evaluation of career development programs and opportunities for health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.
c. Enter any other costs related to career development activities for health workers in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking ![Add Other Cost](image) or ![Remove Other Cost](image). Once completed, click ![Save Intervention Activity](image).

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click ![Cancel](image). You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**D5. Professional Networks**

*Facilitate knowledge exchange* - Support the development of professional networks, rural health professional associations, rural health journals etc. in order to improve the morale and status of rural providers and reduce feelings of professional isolation.

Health workers’ need for continuous professional stimulation is all the more relevant in rural or remote areas, where professional isolation can negatively influence performance. Therefore, supporting professional networking and academic activities, including specialized journals with a focus on rural areas, can prove beneficial for rural health workers.

Some evidence shows that rural professional associations have increased the retention of health workers in rural areas. For example, in Mali, young doctors who were supported by the professional association, “*Association des Médecins de Campagne*”, remained in rural areas for an average of four years; the retention rate was lower for those who did not have this support.

The “*Rural Doctors Society and Foundation*” in Thailand has had several positive effects on the profile and impact of rural physicians. “Apart from supporting rural health services, the society has also actively supported public health movements, such as a national drug policy, an essential drugs list and tobacco control. It has also played an active
role in the national movement toward democratization and political reform as well as a watchdog role to counteract corruption and inappropriate administrative behavior”.

In addition to professional associations, other types of support programs can be envisaged. For example, the “Dr Doc” program launched in South Australia in 2006 has set up various support mechanisms such as telephone consultations, crisis support, links to urban general practitioners (GPs) who provide health care for rural GPs and their families, as well as country practice retreats to allow rural GPs some rest and relaxation. This has reportedly reduced the number of rural physicians who want to leave their practice.

This approach is likely to have larger effects if associated with other interventions, such as A5 (continuing education), D1 (improved living conditions) and D2 (safe and supportive working environment).

Champions may be required in countries to initiate and sustain the development of professional associations. If these associations are only supported by membership fees, they can be vulnerable to long-term sustainability issues.

- excerpt from the WHO Global Policy Recommendations, 2010

Provide grants to develop rural professional associations or rural health journals

To calculate the costs associated with creating, administering, implementing, managing and evaluating grants to support rural professional associations or rural health journals to encourage the professional development of health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of grants that you will provide for each year of your costing timeframe.

d. Enter (in your selected currency) the amount of each grant to be provided.

e. Enter any other costs related to career development activities for health workers in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].

Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Sponsor rural health worker conference**

To calculate the costs associated with sponsoring conferences to bring together health workers from rural, remote, and underserved areas in order to encourage professional network development.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of conferences that you will sponsor for each year of your costing timeframe.

d. Enter the estimated number of participants and facilitators per conference for each year of the costing timeframe.

e. Enter (in your selected currency) the estimated travel and transport costs per participant and per facilitator.
f. Enter (in your selected currency) the estimated lodging and per diem costs per session for each participant and for each facilitator.

g. Enter (in your selected currency) the estimated cost of training materials per session for each participant.

h. Enter the estimated fees for facilitator services per session, beyond travel and lodging costs that may be incurred.

i. Enter the estimated **aggregate** costs for tea or lunch breaks per training session.

j. Enter the estimated **aggregate** costs for venue rental per training session.

k. Enter any other costs that may be related to rural health worker conferences in the **Other Costs** section.

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### D5 Intervention Activity: Sponsor rural health worker conference

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<th>Activity Description (?) *</th>
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<table>
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<th>Cadres Targeted by Activity (?)</th>
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<tbody>
<tr>
<td>Doctors</td>
</tr>
<tr>
<td>Midwives</td>
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<tr>
<td>Nurses</td>
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### Base Costs

<table>
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<tr>
<th>Number of conferences per year</th>
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<tbody>
<tr>
<td>2012</td>
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### Participant Costs

<table>
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<tr>
<th>Number of participants (per conference)</th>
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<td>2012</td>
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<table>
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<tr>
<th>Travel and transport per participant (?)</th>
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<table>
<thead>
<tr>
<th>Lodging and per diem per participant (?)</th>
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<table>
<thead>
<tr>
<th>Training materials/stationery per participant (?)</th>
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### Facilitator Costs

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<tr>
<td>2012</td>
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<th>Travel and transport per facilitator (?)</th>
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<th>Lodging and per diem per facilitator (?)</th>
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<table>
<thead>
<tr>
<th>Fees per facilitator</th>
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### Session Costs

<table>
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<th>Tea/lunch per conference (?)</th>
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<th>Venue costs per conference</th>
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<th>Organization and planning costs per conference</th>
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<table>
<thead>
<tr>
<th>Other costs per conference</th>
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</table>
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost. Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Provide grants to health workers to support networking

To calculate the costs associated with developing, implementing and managing grants for health workers in rural, remote, or underserved areas in order to promote professional networking.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of health workers to receive networking grants for each year of your costing timeframe.

d. Enter (in your selected currency) the estimated grant amount to be awarded per health worker for internet access (i.e. airtime, modem, or hours at a cybercafé) and cellphone usage (i.e. airtime).

e. Enter (in your selected currency) any other grant amount to be paid per health worker.

f. Enter any other costs associated with providing grants to support telehealth networks in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Other activities**

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, management, or evaluation of professional networking opportunities for health workers in rural, remote, and underserved areas.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to professional networking activities for health workers in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**D6. Public Recognition**

Raise the profile of rural health workers - Adopt public recognition measures such as rural health days, awards and titles at local, national and international levels to lift the profile of working in rural areas as these create the conditions to improve intrinsic motivation and thereby contribute to the retention of rural health workers.

Recognition from managers, peers and the public is one of the main motivating factors in health care and in other industries. But in the case of rural health, the evidence on public recognition comes mainly from case studies of individual health workers who have dedicated their lives to serving rural communities, for which they have received numerous public recognition awards.

Whether these awards made them stay longer or whether intrinsic motivation factors contributed to their long-term service in rural areas is difficult to say. Nevertheless, it is likely that simple public recognition measures, such as titles, medals or awards can go a long way in raising the status and morale of rural health workers and thus contribute to their retention in these areas. Such public recognition measures are an occasion to focus attention on individual health workers and their achievements, thereby demonstrating political support for rural health workers and rural health work.

This intervention is relatively inexpensive and can be an important step in improving the recognition of rural health workers. Awards can be offered by health services, professional organizations, regional governments, national governments and international organizations. Integral to the success of this recommendation is the need to promote the award or title. In addition, publishing and bringing the spotlight on rural health worker stories ensures that
information on these role models is distributed throughout the population and may motivate students or new graduates to work in rural areas. This also increases the prestige of such awards to the recipient.

- excerpt from the WHO Global Policy Recommendations, 2010

Design program for health worker awards

To calculate the costs associated with developing a program or policy to award health workers in rural, remote, and underserved areas in order to enhance their public recognition.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of workdays and the cost per day for consultant or staff.

d. Enter the number of participants, travel, per diem, venue, tea, lunch or other workshop costs.

Once completed, click Save Intervention Activity.
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide national awards to rural health workers**

To calculate the costs associated with providing awards to health workers in rural, remote, and underserved areas in order to enhance their public recognition.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of health workers to receive awards for each year of your costing timeframe.

d. Enter (in your selected currency) the amount per award and the aggregate costs for the publicity or media event.

e. Enter (in your selected currency) any other costs associated with providing national health worker awards in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].
Once completed, click [Save Intervention Activity].

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Provide grants to regions/districts to provide health workers awards**

To calculate the costs associated with providing awards to health workers in rural, remote, and underserved areas in order to enhance their public recognition.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of regions or district that will administer health worker awards for each year of your costing timeframe.

d. Enter (in your selected currency) the cost per region or district.

e. Enter (in your selected currency) any other costs associated with providing grants to regions or districts to provide health worker awards in the **Other Costs** section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking [Add Other Cost] or [Remove Other Cost].
Once completed, click **Save Intervention Activity**.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click **Cancel**. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

**Sponsor rural health workers to attend international or national conferences**

To calculate the costs associated with sponsoring health workers in rural, remote, and underserved areas to attend conferences in order to enhance their public recognition.

**To complete information entry for this intervention activity:**

a. Describe the intervention activity (geographic location, length, type, or location of conference, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in **Step 2**.

c. Enter the number of health workers being sponsored to attend conferences for each year of your costing timeframe.

d. Enter (in your selected currency) the costs of travel, transport, lodging, per diem and any other costs per health worker.

e. Enter (in your selected currency) any other costs associated with health worker conference sponsorship in the **Other Costs** section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking Add Other Cost or Remove Other Cost.

Once completed, click Save Intervention Activity.

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click Cancel. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Support rural health days

To calculate the costs associated with leading rural health day events to promote the public recognition of health workers in rural, remote, and underserved areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of event, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter the number of rural health day events to take place for each year of your costing timeframe.

d. Enter (in your selected currency) the costs per event.

e. Enter (in your selected currency) any other costs associated with rural health days in the Other Costs section.
Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .

If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click . You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.

Other activities

This section allows you to calculate the costs associated with any other interventions that could support the development, implementation, management, or evaluation of public recognition activities for health workers in rural and remote areas.

To complete information entry for this intervention activity:

a. Describe the intervention activity (geographic location, length or type of activity, etc).

b. Select the health worker cadres that this intervention will target. The list to select from is automatically generated based on the cadres that you entered in Step 2.

c. Enter any other costs related to public recognition activities for health workers in the Other Costs section.

Because the costs may vary from year to year, you can enter specific annual costs for each year in your costing timeframe.

You can add or remove additional other costs by clicking or .

Once completed, click .
If you wish to abandon any information that you have entered about this intervention activity and exit without saving it, click [Cancel]. You will be able to revise or remove this activity in later stages of the costing exercise if you wish to.
Step 4 – Information Review

iHRIS Retain contains so much information related to an organization’s intervention strategy that we have included a section that allows users to summarize, compare, and visualize their information.

In this step, you can review and modify the financial, cadre, and intervention cost information you entered in Steps 1-3 by navigating along the grey tabs.

Click to the left of each entry to reopen and modify the entry.

Once you have completed your information review of Steps 1-3 and made any edits, proceed to Step 5: Package Design by clicking on the Step 5 link at the top right of the window. (Do not review the “Packages”, or “Reports” tabs until you have completed Step 5.)

PLEASE NOTE: In order to demonstrate how to use Steps 4, 5 and 6, sample information will be displayed in these steps. This information will not be the same as

Basic Information

Review the following basic and financial information that you have entered in these sections.

Click to the left of each entry to reopen and modify the entry.

Cadres

Review the following information about targeted health worker cadres that you have entered in this section.
Click \(\text{Edit}\) to the left of each entry to reopen and modify the entry.

Click \(\text{Add Cadre}\) to include additional health worker cadres in your costing intervention. Please note that if you add the new cadre in Step 4, then you may need to review Step 3 to ensure that selected interventions are targeted to this cadre. You can do this by opening individual intervention activities and clicking on the newly added health worker cadre so that it will now be targeted by the intervention.

Interventions

Review the following information that you have entered in these sections.

If you have many interventions, it may take some time to load all of them, and you may see something like this:

Click \(\text{Edit}\) to the left of each entry to reopen and modify the entry.

Click \(\text{Delete}\) to the left of each entry to remove the intervention from your costing exercise.

Click \(\text{Add Activity}\) to include additional intervention activities in your costing exercise.
Once you have completed your information review of Steps 1-3 and made any edits, proceed to **Step 5: Package Design** by clicking on the **Step 5** link at the top right of the window. (Do not review the “Packages”, or “Reports” tabs until you have completed Step 5.)
Step 5: Package Design

Design Retention Intervention Packages

This step allows you to create different packages of interventions targeting various cadres of health workers.

A package is a combination of selected retention interventions, composed of activities which help you to calculate the costs associated with the intervention. We recommend that you create separate packages for different cadres. For example, you can design packages according to the cadres that you selected in Step 2 of the costing exercise. For example: you may combine interventions into different possible packages that target nurses for which you will be able to compare costs, other packages that target pharmacists, and others that target doctors. Once you have created individual cadre packages, you may also wish to create larger packages that combine interventions offered to multiple cadres.

When you have finished designing your packages, you may return to Step 4 to review them by clicking Step 4 at the top center-right of the window. If you are finished reviewing your packages, then click on Step 6: Reports Review at the top far right of the window.

- Give your package a name that is detailed enough to distinguish it from the others (including health worker cadre target, geographical or activity focus, etc.)
- Describe your package to include the level of comprehensiveness of the package (high-end, mid-level, or low-cost option), and any other identifying information here.
- If you have conducted a Discrete Choice Experiment (DCE) on this exact package of interventions, and you have calculated its health worker preference rate, then enter it in the text box to the bottom left. If not, then leave this box blank.
- Under Selected Intervention Activities, scroll and click on the intervention activities that you would like to include in this package.
Once each package is completed, click **Save**.

Repeat the above steps to design additional packages. If you need to add additional packages, then click on **Add Package**.
Step 6: Reports Review

This step allows you to review the reports generated from the costing exercise and compare the costs of different retention interventions and packages. The main menu of reports available will appear something like this:
Summary Reports

Under Summary Reports, click on a report to view it. You can download a selected report by clicking on the button at the bottom of the report (please note that it may take a few seconds to load) to open and save it in Excel.

For example, if you click on the first report, the Cost of All Interventions by Year, you will see something like this:

![Costs of All Interventions by Year](image)

... if you have entered many intervention activities, the report table will extend for multiple rows until the total costs for all intervention activities per year are displayed, along with the total cost of all interventions.
At the bottom of the report, you have the option to click on to export the report to a Microsoft Excel spreadsheet. You will need to have Microsoft Excel software downloaded on the computer that you are using.

At the bottom of your internet browser, the follow message may be prompted:

![Image of Excel download prompt]

Click to view the report in Excel. (Save and close all other report exports first.) You will see something like this:

![Image of Excel spreadsheet]

Within Microsoft Excel, click Save to save this report table to your computer.
Cadre-Specific Reports

For the Cadre-Specific Reports, use the drop-down menu to select which health worker cadre you would like to review.

For example, if you select Nurse / Midwives on the second report, the Cost of All Retention Packages with Intervention Activities by Cadre, you will see something like this:

<table>
<thead>
<tr>
<th>Package Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
<th>Preference Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination as proposed by Dr. X (A1, B3, D4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1 Develop rural recruitment plan (Description: Rural recruitment plan) Nurse, Nurse / Midwives, Pharmacist</td>
<td>$3,806</td>
<td>$0</td>
<td>$0</td>
<td>$3,806</td>
<td></td>
</tr>
<tr>
<td>B4 Provide ongoing management of program (Description: N/M subsidy program) Nurse / Midwives</td>
<td>$0</td>
<td>$25</td>
<td>$31</td>
<td>$57</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$3,806</td>
<td>$26</td>
<td>$31</td>
<td>$3,863</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

District A only

<table>
<thead>
<tr>
<th>Package Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
<th>Preference Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3 Design and plan program (Description: Design and plan program for NIMW) Nurse, Nurse / Midwives</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>B2 Conduct stakeholder consultations regarding new cadres (Description: New cadre consultation) Nurse, Nurse / Midwives</td>
<td>$8</td>
<td>$0</td>
<td>$0</td>
<td>$8</td>
<td></td>
</tr>
<tr>
<td>D2 Provide Transportation Support (Description: Transport support) Nurse, Nurse / Midwives</td>
<td>$0</td>
<td>$46</td>
<td>$11</td>
<td>$57</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$14</td>
<td>$46</td>
<td>$11</td>
<td>$71</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

Facility & school upgrade

<table>
<thead>
<tr>
<th>Package Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
<th>Preference Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4 Develop new training/education materials (Description: New training materials) Nurse, Nurse / Midwives</td>
<td>$3</td>
<td>$0</td>
<td>$0</td>
<td>$3</td>
<td></td>
</tr>
<tr>
<td>D1 Upgrade electricity in existing accommodations (Description: Upgrade electricity) Nurse, Nurse / Midwives</td>
<td>$0</td>
<td>$18</td>
<td>$27</td>
<td>$45</td>
<td></td>
</tr>
<tr>
<td>D1 Construct and furnish new staff housing (Description: New staff housing - all Nurse, Nurse / Midwives</td>
<td>$1</td>
<td>$3,189</td>
<td>$4,929</td>
<td>$8,119</td>
<td></td>
</tr>
</tbody>
</table>
At the bottom of the report, you have the option to click on **Download** to export the report to a Microsoft Excel spreadsheet. You will need to have Microsoft Excel software downloaded on the computer that you are using.

At the bottom of your internet browser, the follow message may be prompted:

![Image of the message](image)

Click **Open** to view the report in Excel. (Save and close all other report exports first.) You will see something like this:

![Image of Excel spreadsheet](image)

Within Microsoft Excel, click **Save** to save this report table to your computer.
Package-Specific Reports

For the **Package-Specific Reports**, use the drop-down menu to select which package you would like to review.

For example, if you select **District A only** on the second report, the **Projected Total Costs by Intervention Type for Package**, you will see something like this:

At the bottom of the report, you have the option to click on **Download** to export the report to a Microsoft Excel spreadsheet. You will need to have Microsoft Excel software downloaded on the computer that you are using.

At the bottom of your internet browser, the follow message may be prompted.

Click **Open** to view the report in Excel. (Save and close all other report exports first.) You will see something like this:
Within Microsoft Excel, click **Save** to save this report table to your computer.

**Package-Specific Charts**

For the **Package-Specific Reports**, use the drop-down menu to select which package you would like to review.

For example, if you select **Combination as proposed by Dr. X (A1, D)** on the first report, the **Annual Costs of Interventions as Percentage of Total Health Sector Budget**, you will see something like this:
At the bottom of the chart, you have the option to click on [Download] to export the report to a separate tab on your internet browser, where you can save it as a PNG (*.png) or bitmap (*.bmp) image file.

Alternatively, if you would like to make your own charts, you can download the report as a Microsoft Excel spreadsheet table and then insert your own chart.

**Package Comparison Reports**

For the **Package Comparison Reports**, first select the total number packages that you would like to compare by clicking each package on the list to the right. Then click on the type of report you would like to the left.

A report will appear that looks something like this:
At the bottom of the report, you have the option to click on [Download] to export the report to a Microsoft Excel spreadsheet. You will need to have Microsoft Excel software downloaded on the computer that you are using.
At the bottom of your internet browser, the following message may be prompted:

![Image of the message](image)

Click **Open** to view the report in Excel. (Save and close all other report exports first.) You will see something like this:

![Image of the Excel report](image)

Within Microsoft Excel, click **Save** to save this report table to your computer.

**Package Comparison Charts**

For the **Package-Specific Charts**, first select the total number packages that you would like to compare by clicking each package on the list to the right. Then click on the type of chart you would like to the left.
For example, if you select the second report, the **Total Cost of Each Package**, you will see something like this:

At the bottom of the chart, you have the option to click on `Download` to export the report to a separate tab on your internet browser, where you can save it as a PNG (*.png) or bitmap (*.bmp) image file.

Alternatively, if you would like to make your own charts, you can download the report as a Microsoft Excel spreadsheet table and then insert your own chart.
**File Management**

The file management section allows you to **export** and **copy** files that you have created while working with iHRIS Retain. Locate the **File Management** tab under information review tabs of **Step 4**.

**File Access**

Under **File Access**, you are able to share your costing exercise with other users. Use the scroll bar on the right to locate users with whom you would like to share your costing exercise. Click on the arrow to the left of the user name:

![File Access](image)

Then click **Update Access** to allow user access.

**Export File**

This feature allows you to **export** the entire data file that you have been creating during your costing exercise. This will allow you make a more detailed analysis and to manipulate the data independently should you so choose.

**Export File**

Export the entire file to an Excel spreadsheet for more detailed analysis.

Click **Export** to export the report to a Microsoft Excel spreadsheet. You will need to have Microsoft Excel software downloaded on the computer that you are using.

At the bottom of your internet browser, the follow message may be prompted.
Click **Open** to view the report in Excel. (Save and close all other report exports first.) You will see something like this:

Note that clicking on the tabs at the bottom of the spreadsheet allow you to navigate from the **Summary Report**, to **Financial Information**, and through all sub-category intervention activity tabs (i.e. A1, A2, A3, through D6). This spreadsheet may be helpful to review or refine activities and their respective budgets.

Within Microsoft Excel, click **Save** to save this report table to your computer.
Copy File

You may wish to copy your costing exercise file to use it as a template for a new, modified costing exercise where you make adjustments to a pre-existing retention strategy, without overwriting the original values.

Give the new copy of your costing exercise a name and description. Then click Create Copy.
## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadre</td>
<td>The type of health worker that some or all of the retention interventions may target in your costing exercise.</td>
</tr>
<tr>
<td></td>
<td>In Step 2, you will be asked to enter information about the different cadre that may be targeted in your various retention interventions. You may be as specific or general about the cadre as you wish. For example, you could have an intervention that is very specific to only one type of health worker, such as training or equipment that pertains exclusively to their work. Or you could have an intervention that benefits all health workers because it helps to strengthen the capacity of the health system.</td>
</tr>
<tr>
<td></td>
<td>Please note that in Step 3, when you are providing information about a retention intervention and the detailed implementation activities that are the components of the intervention, you will have the opportunity to attribute it to one or several of your defined cadres. This will help you to distinguish between intervention activities, and to organize your activities when designing packages in Step 4.</td>
</tr>
<tr>
<td>Costing Exercise</td>
<td>The process of developing a retention strategy for health workers in rural, remote, and underserved areas, accomplished through iHRIS Retain software. The costing exercise includes defining the current budget context, the health worker cadres to target, the types of intervention activities to consider with their respective costs, and packages of these activities. The resulting reports will allow you and other stakeholders to compare and refine the elements that you will ultimately include in your overall retention strategy.</td>
</tr>
<tr>
<td>Costing Exercise Description</td>
<td>While it is optional, it is recommended that you add provide further details to describe the costing exercise for future reference. Consider including: the types of health workers targeted, a description of the interventions, the geographic scope of the interventions (national, regional, district level).</td>
</tr>
<tr>
<td>Costing Start Year</td>
<td>Select the year that the retention interventions are estimated to be implemented.</td>
</tr>
<tr>
<td>Costing Timeframe (in years)</td>
<td>This is the number of years that the costing exercise will cover. The costing projections that the iHRIS Retain software (v1.2) will produce can be designated for between one and five years.</td>
</tr>
<tr>
<td>Currency</td>
<td>Enter your country’s currency. Please note that for some regional currencies, such as Central African Franc (XAF), you may need to search for a country other than yours. For example, Gabon is listed for the Central African Franc (XAF), although it is also the currency used in Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea, and Gabon. When reviewing reports, you will also be able to review some information in United States Dollars (USD).</td>
</tr>
<tr>
<td>Current Year</td>
<td>Your costing projections in future years will be adjusted for inflation based on the current year.</td>
</tr>
<tr>
<td>Date of Exercise</td>
<td>Enter today’s date. This is important in case the costs of your interventions change over time, as the result of new information, inflation, a new donor, or new partners. It is important to keep a record of when your costing exercise was made so that you know what stage of your retention strategy development is reflected by your costing projections.</td>
</tr>
</tbody>
</table>
### Discrete Choice Experiment (DCE)
A quantitative research method to determine the relative importance health workers place on different job characteristics and to predict health workers’ decision-making using hypothetical choice data. Eliciting health worker preferences for various incentive packages can help determine how health workers may respond to the implementation of future financial and nonfinancial incentives to attract and retain them to work in health facilities in rural and remote areas.

### Inflation rate
The percentage of change in price level from one year to the next. It is based on the change in cost to an average consumer to purchase goods and services. In the iHRIS Retain software (v1.2), the inflation rate is calculated on an annual basis. For a list of historical inflation rates by country, please refer to: [http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG](http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG)

### Intervention Activity
An action, plan, or event that could be implemented as part of your overall retention strategy. In Step 3 of iHRIS Retain, you will have the opportunity to provide detailed costing information for different aspects of the intervention activity.

### Name of Costing Exercise
Assign a unique name that allows you to easily distinguish this costing exercise for future revisions or reviews. For example: “Incentives for Doctors”, “Kigoma District Interventions”, or “Northern Region Retention Strategy”.

### Package
A combination, or bundle, of different intervention activities that you and your team group together to formulate the elements of your overall retention strategy.

### Preference Rate
Expressed as a percentage, a calculation that can be done as part of a discrete choice experiment for incentive packages that you may be considering. A higher preference rate for a package means that it is expected to yield a higher percentage of health workers motivated by the package. In this way you can see how varying the incentives offered affects the desirability of a job among a cadre of health workers. Preference rates can be calculated for interventions that can be offered directly to individual health workers (i.e. training opportunities, transportation stipends). Preference rates cannot be calculated for intervention activities that would impact the entire health system more broadly (i.e. policies or regulation).

### Total Health Sector Expenditures/Budget
Enter the annual budget for the health sector as defined by the geographical area of your costing exercise (i.e. national, regional, district), including the recurrent costs and personnel costs funded directly by your organization. If you are conducting a costing exercise that is for only one region, then this number would be the total regional health sector budget.

### Total Personnel Expenditures/Budget
As part of the total health sector budget, enter the annual amount budgeted for supporting the salaries, allowances and benefits for your organization’s staff and consultants.

### Total Recurrent Expenditures/Budget
As part of the total health sector budget, enter the annual operating expenses for the health sector, including goods, services, supplies and other recurring costs that allow your organization to operate. Do not include personnel costs or expenses.