

## MSI's Task-sharing impact model

A simple tool to show the potential impact of allowing greater task-sharing of family planning

### Background

Marie Stopes International (MSI) has developed the Task-sharing impact model to help quantify the potential benefits of task sharing of family planning services. When users add data on current task sharing policy, number of healthcare workers in the selected country, and their average salaries, the model can quantify country specific estimates of the potential benefits of task sharing. These include:

- Improved ratio of family planning providers to women.
- Amount of doctor time freed up by task sharing to lower cadre workers.
- The increased health impacts resulting from liberalisation of task sharing policies, for a pre-defined health worker salary spend.
- The improved cost effectiveness of serving a pre-defined number of family planning clients.

Through quantifying the potential benefits of task sharing in a specific national context, the task-sharing impact model can be a powerful tool for those advocating for policy reforms in this area.

### How it works

The model uses pre-loaded and user entered data to produce country-specific estimates of the impact of task-sharing reforms, through comparing three different scenarios, current task-sharing policy, a user defined policy change, and full implementation of the World Health Organization (WHO)'s recommendations on task sharing.<sup>1</sup>

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<sup>1</sup> WHO recommendations: optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting. World Health Organization, 2012.



***Compare difference across each situation:***

***Number of providers***

***Spending on salaries***

***Increased health impacts***

Users enter data on the current task sharing policy in their chosen country, as well as their suggested policy change. Additional information, including the number of healthcare workers in each of the eight cadres the WHO recognises, and their estimated annual salary is also added. Once data entry is completed, the model produces estimates of the potential benefits of the suggested task-sharing policy change, and full adherence to the WHO standards.

The following is a step-by-step guide in how to use the model to produce these estimates.

## Using the model

Note: While using the model, you can click on question mark icons, which will explain the steps you need to take on that page.

### **Step one - country context information**

- At the top of the page, select your country and the year. The model is pre-loaded with population and urban/rural split data for each country, which changes by year.
- Enter the number of health workers in each cadre that work in the selected country, their average salary, and the number who work in rural areas (optional). If these are not available, use a reasonable estimate. The cadre list is drawn from the WHO's guidelines on task-sharing.
- Enter the current task sharing policy for the country. If a cadre are allowed to provide the service, enter a '1' in the cell and if they cannot, enter a '0'. The WHO's recommendations for what services each cadre can provide are colour coded.

- Enter Hours worked and time spent with clients (optional)
  - This data is used by the model to estimate the amount of doctor time freed up by task sharing family planning services to lower cadre health workers. Defaults are set, but you can revise them.

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**Country information for: Ethiopia** **2014**

\*Select country \*Select year

**Required information** (you must fill in the yellow boxes for the model to work)

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors
<b>Current workforce:</b>								
Number providers in country (total)	1,000	2,000	3,000	3,500	3,000	2,000	1,000	500
Average annual salary	1,000	2,000	3,000	5,000	7,000	9,000	11,000	15,000
Number of providers in rural areas (optional)	300	600	1,400	1,500	1,000	800	400	150
<b>Year of cost data:</b>	2014		<b>Currency:</b> GBP		(e.g. GBP, USD, XCF)			
<small>Source and notes:</small>								

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors
<b>Current laws:</b> Enter 1 in the box if the cadre is allowed to provide the service, and 0 if they are not. You can also use fractions, e.g. enter 0.5 if half of midwives have qualifications to provide implants								
Female sterilisation	1	1	1	0	0	1	1	1
Male sterilisation	0	0	0	0	0	1	1	1
IUD	0	0	0	0	0	1	1	1
Implant	0	0	0	0	0	1	1	1
Injections	0	0	0	1	1	1	1	1
Pills and condoms	1	1	1	1	1	1	1	1
<small>Source and notes: RHFI</small>								

**Number of women of reproductive age (15-49) in Ethiopia in 2011** 23,117,641

Estimated Urban WRA 4,115,541 [Click to reset WRA figure](#)

Estimated Rural WRA 19,002,100

Source and notes: I/PRA - UN Population Prospects (2012 Revision); Urban/Rural split - UN World Urbanization Prospects (2011 Revision)

**To skip optional information click [Next](#) →**

**Optional information** (global defaults have been set, you can update them if you have information from your country)

<b>Weeks and hours worked:</b>	
Weeks worked per year	40
Hours worked per week	30
<a href="#">Click to return to global defaults</a>	

	Primary provider	Secondary providers (to assist with procedure)							Total provider time
		Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Total (secondary)		
Female sterilisation	30	0	0	0	75	0	75	105	
Male sterilisation	30	0	0	0	60	0	60	90	
IUD	50	0	0	0	0	0	0	50	
Implant	35	0	0	0	0	0	0	35	
Injections (inc resupply visits*)	35	0	0	0	0	0	0	35	
Pills and condoms (inc resupply visits*)	35	0	0	0	0	0	0	35	
<small>*Include all visits needed for a full year of coverage; e.g. total time for 4 visits for 3-month injections</small>									

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors
<b>Average % time spent with FP clients:</b> (i.e. exclude paper work, downtime, travel (if non-clinic based), etc)								
Minutes per day	40%	40%	40%	40%	40%	40%	40%	40%

**Next** →

**Key to recommendations**

- Already accepted
- Recommended
- In the context of M&E
- In the context of rigorous research
- Not recommended

## Step two - setting task share policy levels

The model compares the outcomes of three separate policy scenarios; the selected country's current regulations on family planning task sharing, a suggested policy change, and 'full implementation' of the WHO's recommendations (note, it may not be realistic or desirable for your selected country to implement these recommendations in full).

On this page you must enter your suggested policy change. Any cadres that should be able to provide a service should have a '1' entered in the relevant cell, with a '0' entered if the cadre should not be allowed to provide the service. There is the option to project a scenario where some, but not all of the members of a cadre can provide a service, for example, if you wanted to project 50% of midwives being able to provide an implant, you would enter '0.5' in the relevant cell.



### Task share policy levels in Ethiopia

Use the matrix below to set your suggested policy changes; later, you will then be able to see the potential impacts of these changes. You can always come back and revise this later. The matrix is shaded to correspond with the WHO recommendations to guide your suggested changes.

**Key to recommendations:**

Not recommended	In the context of rigorous research	In the context of M&E	Recommended	Already accepted
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Suggested policy change								
	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors
Female sterilisation				0.0	0.5	1.0	1.0	1.0
Male sterilisation		0.0	0.0	0.0	0.5	1.0	1.0	1.0
IUD		0.0	1.0	1.0	1.0	1.0	1.0	1.0
Implant	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Injections	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Pills and condoms	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



Full adherence to the WHO Recommendation								
	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors
Female sterilisation				1.0	1.0	1.0	1.0	1.0
Male sterilisation		1.0	1.0	1.0	1.0	1.0	1.0	1.0
IUD		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Implant	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Injections	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Pills and condoms	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

## Step three – task share distribution

For each of the three policy scenarios that are presented by the model, service delivery is distributed across all eligible cadres. As a default, the proportion of services that each cadre delivers is the same as the proportion of all health workers that that cadre represents.

On this page, you also have the option to set your own distributions for each of the three scenarios. For example, if you wanted a scenario where only nurses and midwives delivered implants, you would enter 0% for all other cadres, so the 100% was split between nurses

and midwives. Cells in red cannot be changed and will stay at zero, as these services cannot be provided by the relevant cadre in the policy scenario.

Once you have selected your desired distribution of service delivery for all three policy scenarios, click next.



## Task-share distribution ?

Click to set default distribution

### Suggested policy change

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors	
Female sterilisation	0%	0%	0%	0%	30%	40%	20%	10%	100%
Male sterilisation	0%	0%	0%	0%	30%	40%	20%	10%	100%
IUD	0%	0%	23%	27%	23%	15%	8%	4%	100%
Implant	0%	13%	20%	23%	20%	13%	7%	3%	100%
Injections	6%	13%	19%	22%	19%	13%	6%	3%	100%
Pills and condoms	6%	13%	19%	22%	19%	13%	6%	3%	100%



### Full adherence to the WHO Recommendation

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors	
Female sterilisation	0%	0%	0%	35%	30%	20%	10%	5%	100%
Male sterilisation	0%	13%	20%	23%	20%	13%	7%	3%	100%
IUD	0%	13%	20%	23%	20%	13%	7%	3%	100%
Implant	6%	13%	19%	22%	19%	13%	6%	3%	100%
Injections	6%	13%	19%	22%	19%	13%	6%	3%	100%
Pills and condoms	6%	13%	19%	22%	19%	13%	6%	3%	100%

### Current Law

	Lay health workers	Auxiliary nurses	Auxiliary nurse midwives	Nurses	Midwives	Associate Clinician	Advance associate clinician	Non-specialist doctors	
Female sterilisation	0%	0%	0%	0%	0%	57%	29%	14%	100%
Male sterilisation	0%	0%	0%	0%	0%	57%	29%	14%	100%
IUD	0%	0%	0%	0%	0%	57%	29%	14%	100%
Implant	0%	0%	0%	0%	0%	57%	29%	14%	100%
Injections	0%	0%	0%	35%	30%	20%	10%	5%	100%
Pills and condoms	6%	13%	19%	22%	19%	13%	6%	3%	100%

## Step four – proposed client mix and goal setting

This page has three important data entry elements.

The first is the methods that the clients in your task sharing scenarios will be seeking. The default data here (where it is available) is based on DHS surveys of contraceptive use for your selected country. Figures on long acting and permanent method use have been divided by their CYP factors, to estimate the client flow that would occur in a single year for these

services (in other words, short term method users will regularly need their method replenishing, but long acting or permanent users will only require a service every few years). For each method, you should enter the proportion of your client pool that you think will seek that method.

N.B. If you just want to look at the impact of task sharing a single method down to lower cadre health workers, for example implants, you would enter 100% for that one method. The model will then project a scenario where all family planning clients are implant clients, and your results on larger health impact and cost effectiveness will just relate to this method.

You must then set a couple of goals: salary budget and client numbers. These are used by the model to generate results that show how task-sharing can increase the reach and impact of family planning services (for a set salary budget), and free up doctor time and reduce the salary cost of providing services (when serving a set number of clients). For sense checking, the model will tell you what proportion of women of reproductive age could be served under the current policy with the salary budget you enter. Similarly, when you enter the number of women you are aiming to serve, the model will show the salary cost of this under the current policy.

Once you have completed these three steps, you should click next. The model will access Impact 2.1 to generate the estimated health impacts of your task sharing scenarios. **For this to work, you must have the Impact 2.1 file saved in the same folder on your computer as the task sharing impact model.**

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### Proposed method mix, salary budget and client numbers

**Step 1: Enter your all women or in union method mix for clients served this year (or use default)**

Method mix of FP clients in Ethiopia		Default source:	2011 DHS
<b>Married/in union women</b>			
Female sterilisation	2%	*% of clients, not commodities, for short-term methods, 'client' = one women using the method for a full year Only includes clients who receive STMs from one of the 8 cadre included— not social marketing or pharmacies	
Male sterilisation	0%		
IUD	1%		
Implant	12%		
Injections	76%		
Pills	8%		
Condoms	1%		
	100%		

**Step 2: Set your goals: by budget and by client numbers. NOTE: this will produce two sets of unrelated results**

	For increased reach/impact results	For reduced salary spend and doctor time saved results
Enter the total amount (annually) to spend on FP provider salaries only:	20,000,000 in GBP	Enter the total amount of clients you would like to serve (annually):
Based on the data in Step 1, this budget would mean that	9% of all women of reproductive age could receive services under the current policy	Based on the data in Step 1, under the current policy reaching this number of clients would cost
(this should be lower than your CPR, as it does not include women using LAPMs provided in past years)		19,337,806 in GBP (FP provider salaries only)

Then click next

→ Next

## Results

The four different results of your three task-sharing scenarios are presented across different tabs. Increasing access and freeing up doctor time are method specific results; as task sharing regulations vary for different contraceptive methods. You can select the method you want to look at from the drop down list.

1. For **increased access**, results are shown for the whole country and also rural areas (if you entered the number of providers in rural areas in step 1). They are presented as the total number of providers who can deliver the service, as well as the number of women for every provider. Note that this is not affected by step three – task share distribution; it just represents the number of workers who are permitted by law to provide the chosen family planning service.
2. For **freeing up doctor time**, the results are presented in minutes and weeks, with two sets of tables, one for every 100 clients, and one for the total number of clients you entered in step four.
3. For a **larger health impact**, the model takes the salary budget you entered on page four, and uses MSI's Impact 2 model to estimate the increased health impacts of reaching more women for the same budget through task sharing. Note that this only takes account of salary spending; the model does not account for the fact there may be an initial rise in costs of delivering services, whilst lower cadre workers are being trained.
4. For **cost effectiveness**, the model uses the number of clients served that you entered on page 4, and compares the salary spend that is required to serve these clients under the different task sharing scenarios.

## Results: key messages about task sharing

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[Scenario Comparison](#)

[1: Increase access](#)

[2: Free up doctor time](#)

[3. Have larger impact](#)

[4. Cost effectiveness](#)

[5. All results in tables](#)

### What are you comparing?

Under your county's current policy:	Your proposed policy change would mean:	Full adherence to WHO recommendations would mean:
3 cadre allowed to provide Female sterilisations	1 additional cadre would be allowed to provide this service	a further 2 cadre would be allowed to provide this service
3 cadre allowed to provide Male sterilisations	1 additional cadre would be allowed to provide this service	a further 4 cadre would be allowed to provide this service
3 cadre allowed to provide IUDs	3 additional cadre would be allowed to provide this service	a further 1 cadre would be allowed to provide this service
3 cadre allowed to provide Implants	4 additional cadre would be allowed to provide this service	a further 1 cadre would be allowed to provide this service
5 cadre allowed to provide Injections	3 additional cadre would be allowed to provide this service	no additional task sharing of this service, your current policy already fully adheres to WHO recommendations
8 cadre allowed to provide Pills and condoms	no additional task sharing of this service, your current policy already fully adheres to WHO recommendations	no additional task sharing of this service, your current policy already fully adheres to WHO recommendations

## Interpreting results

The model shows the *potential* impact of a policy change—e.g. the maximum impact that could be achieved if the policy was fully implemented. It does not mean that just because a policy is changed, these impacts will automatically be realised. Rather, they results are designed for high-level advocacy, to help promote and quantify what could happen if task-sharing policies were changed. For actual impacts to happen, much more needs to be considered—policy implementation, provider training and capacity, geographic placement of providers, availability of supplies, etc.

It is recommended that this tool be used to engage policy makers in initial conversations about task-sharing family planning services. However, beyond this, a more in-depth country analysis would be needed to better understand the implications of a policy change, and plan for effective policy implementation.

### **Comparing numerous different policy change scenarios**

The model's results are influenced by a range of different variables (outlined in the next section). This means that running the model on a number of occasions to produce a range of different policy change projections can be a useful way of highlighting the impact of a particular variable.

As an example, we might be interested in looking at the impacts of task-sharing IUD service delivery down three cadre from Associate Clinician level to Auxiliary Nurse Midwives. We could project a range of different scenarios through altering certain variables, for example, running one scenario where service delivery was distributed evenly across all eligible cadre, and another where the lower cadres take on the majority of service delivery. Similarly, the impacts of projected scenarios could change significantly based on the client method mix that is entered, and what proportion of all clients receive an IUD.

Creating a range of different projected scenarios can be an effective way of showing how changes to certain variables, such as salary budget, distribution of service delivery across cadre, and client method preferences, can have on the potential impact of task-sharing.

### **Limitations**

This is a model, rather than a measure of real life. As such, the estimates it produces are only as good as the data and assumptions entered into the model. With the model using a number of different variables to produce its results, results must be carefully presented and interpreted to avoid confusion. The table below summarises which variables affect which results in the model:-

	Number of health workers in each cadre (rural optional)	Average salary of health workers	Current & suggested task-sharing policy	Amount of time spent with FP clients & time taken to deliver service (model has defaults)	Task share distribution (Step three)	Method mix of FP clients (Step four)	Number of clients served annually (Step four)	Health worker salary budget (Step four)
Increased Access	✓	✗	✓	✗	✗	✗	✗	✗
Freeing up doctor time	✓	✗	✓	✓	✓	✓	✓	✗
Larger health impact	✓	✓	✓	✓	✓	✓	✗	✓
Cost effectiveness	✓	✓	✓	✓	✓	✓	✓	✗

Any one of these variables can have an impact on the results that the model produces. For a simple result such as how task sharing increases access to family planning, only two of the eight variables are required, but other results, particularly on how task sharing can produce a larger health impact and lead to cost savings, require more data entry.

This means that results should be presented as *estimates*, derived from the best available data, which suggest the *potential* impact of task-sharing reforms. As some of the variables are user generated assumptions, for example the budget and client number constraints on page four, the role of these assumptions should also be mentioned. For example:

*“We estimate that task sharing of IUD services in Ethiopia down to auxiliary nurse midwives and nurses would save £5 million in salary costs per year, for every million clients served”.*