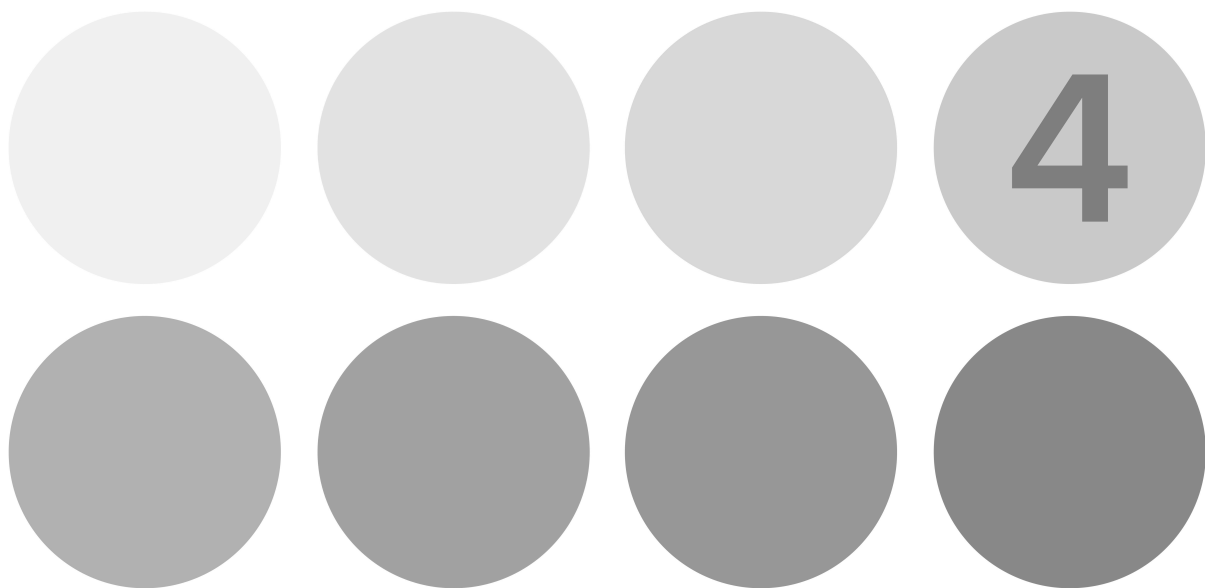


A Guide to Health Reform

Eight Practical Steps

Step Four: **Diagnosing Causes of Problems**



**HARVARD
T.H. CHAN**

SCHOOL OF PUBLIC HEALTH

Department of Global Health
and Population

By Michael R. Reich,
Paola Abril Campos,
Anuska Kalita,
Anya Levy Guyer,
and Winnie Yip

Step Four: Diagnosing the Causes of Performance Problems

In Step Four, we diagnose the causes of health system performance problems. Just as a doctor diagnoses a disease based on the symptoms presented by a patient, the Health Reform Team seeks to diagnose the underlying cause(s) of the performance problem(s) that the health system assessment found. *The primary objective of Step Four is diagnosis—that is, to examine the possible reasons for specific performance problems by tracing the reasons to one or more of the five policy areas represented by the control knobs.*

And just as the doctor uses the diagnosis of a disease to determine an appropriate course of treatment, the findings from the diagnostic process in Step Four form the foundation for designing appropriate reforms based on the policy control knobs. Focusing on the policy areas represented by the control knobs will help you avoid a common mistake made in this step: tracing the cause of poor performance to determinants or factors that are beyond the influence or control of policymakers.

In this Step, the Health Reform Team takes four key actions:

Key actions in Step Four:

<input checked="" type="checkbox"/>	Decide which performance problems to diagnose, using the assessment(s) from Step Three as well as the priorities defined by the Health Reform Team and political leadership
<input checked="" type="checkbox"/>	Decide who will do the diagnosis, considering both external analysts outside of government and internal analysts (on the Health Reform Team and in government agencies), including the time and resources required
<input checked="" type="checkbox"/>	Using a systems approach, describe the structure and functioning of the current health care system that is facing the selected performance problems
<input checked="" type="checkbox"/>	Using a systems approach, construct a diagnostic tree, using primary and secondary data, to reveal the root causes of the performance problems
<input checked="" type="checkbox"/>	Link the root causes to the policy control knobs (and identify linkages among the underlying causes) to identify areas for intervention (in preparation for selecting reform options in Step Five)

Decide what to diagnose

The first action in this Step is to decide which performance problems to examine in your diagnostic analysis. The health system performance assessment conducted in Step Three typically uncovers many performance problems in the health system. From that set of identified problems, the Health Reform Team now has to select a few specific problems for deeper diagnosis.

As you make this selection, the Health Reform Team should take several factors into account, including your reflections on the health system’s ethical principles, current political and economic priorities and opportunities, socio-cultural norms, current public health emergencies, and others.

The Odisha Health System Assessment, as discussed in Step Three, found multiple performance problems (Yip et al., 2022). Regarding the system’s final outcomes, the assessment concluded that: health status had improved, but chronic diseases were on the rise; financial risk protection was

poor; and, public satisfaction with the health system was low among vulnerable population groups. On the intermediate outcomes, there were notable achievements in access to care, but quality of care and efficiency were problematic. Significant equity issues existed for both final and intermediate measures.

So how do you decide which challenges to focus on for diagnosis?

Start from ethical principles. If Odisha's political leaders have declared that equity and distributive justice are key ethical priorities, the Health Reform Team might begin by focusing on diagnosing the reasons for inequities among socio-economically disadvantaged groups in public satisfaction and access to care. On the other hand, given that the state government had already invested in establishing a flagship health insurance program, Odisha might instead prioritize analyzing the causes behind the low achievement in financial risk protection. Yet another possibility: in light of the health crisis of the COVID-19 pandemic, Odisha's government might see improving the quality of care delivered by the system as the most critical performance problem, and thus might decide to make clinical effectiveness the top priority for diagnosis.

Diagnosis requires significant time and effort to identify the underlying causes of performance problems. Thus the selection of which performance problem to focus on has important implications, as it will affect the scope of the reform, the budget required, the timeline, and the necessary capacity of the Health Reform Team. In deciding what to diagnose, the Health Reform Team must have direct and honest discussions with top political leaders about what will be required. This decision will shape (and reflect) the overall strategic direction of the health reform process. These discussions may need to take place off the record in order to fully communicate the ramifications and implications of the choice.

Once again, a decision in the health reform process—in this instance, deciding what to diagnose—is not a simple technical decision. As with previous decisions, the Health Reform Team must consider the overall political and ethical objectives of the health reform process, as well as technical feasibility. The decision about what to diagnose ultimately shapes the overall scope of the health reform effort, including how ambitious it is and what kinds of improvements in health system performance are targeted.

Plan a diagnostic process

Once you have decided on the performance problem(s), you can plan out a diagnostic process (keeping in mind that the primary goal of diagnosis is to trace the determinants of poor performances to the root causes in the five policy control areas). This step also requires the Health Reform Team to develop and incorporate a clear and shared understanding of the policy control knobs, as these will be used, together with the performance assessment results from Step Three, to identify underlying causes of poor performances. Diagnosing the causes of performance problems and identifying the relevant policy control knobs, in turn, form the basis for Step Five (designing health reform options). The feasibility of various reform options will be constrained by how the health system currently functions.

Decide who will do the diagnosis

Generating a good diagnosis is challenging. Therefore, it is important to engage analysts and experts with qualifications *and* prior experience in health system analysis (again, emphasis on *systems*). They should be familiar with key concepts, relevant theories and methods, and the empirical evidence that links the five control knobs with health system performance.

In addition to health system experts, you also need people with subject matter expertise on the selected performance problem(s). For example, analysts with training in health economics, actuarial science, and public finance can lead diagnosis of financial risk protection problems, while medical clinicians who have experience in quality improvement can support diagnosis of quality of care problems, and epidemiologists can focus on diagnosis of health status problems.

As with the assessment process in Step Three, finding the right mix of people to undertake diagnosis is critically important. The selection process is determined by what you seek to diagnose and the resources available for the diagnostic process. Just as a doctor may order multiple pathology and imaging tests to be conducted by specialists in order to make a diagnosis, the Health Reform Team may need multiple analyses and expert inputs. And again, budgets, timelines, and contracting rules are key considerations as you determine whether to use an internal group (located within a government agency or research group) or to hire an external group of experts.

It is advisable for some core members of the Step Three assessment group to continue on as members of the Step Four diagnostic team. This will ensure familiarity with the assessment findings and contribute to continuity when thinking through the diagnostic questions.

Finally, as in Step Three, the Health Reform Team needs to work closely with the diagnostic group. Close collaboration and communication with the Health Reform Team can help to align the diagnosis process with the ethical, political, and economic priorities of the overall reform effort, as well as with the timeline.

Describe the existing healthcare system

The five policy control knobs linked to health system performance (shown in Figure 3-1) are each discussed in detail in a separate chapter in *GHRR*. The policy control knobs are:

- **Financing** refers to how money is raised, risk pooled, and allocated—and how this affects both performance and equity in the health system. (*GHRR-Chapter 8*)
- **Payment** focuses on which organizations and individuals in the health system are paid, how and how much they are paid, and the incentives created by those payments. (*GHRR-Chapter 9*)
- **Organization** focuses on how activities in the health system are divided among public and private entities, the degree of reliance on market competition, and distribution of functions among centralized and decentralized agencies, clinics, and hospitals, as well as internal organizational management issues. (*GHRR-Chapter 10*)
- **Regulation** refers to government efforts to alter behavior in the private and the public sectors by imposing rules that are backed by sanctions. (*GHRR-Chapter 11*)

- **Persuasion** refers to efforts to convince health system actors (doctors, patients, policy makers, etc.) to change certain behaviors through education, social marketing, and other behavior change interventions. (*GHRR-Chapter 12*)

Describing the current healthcare system requires collecting information about the current state of each policy control knob. Depending on how familiar the Health Reform Team is with the current system, and how well it is documented, this may be more or less difficult to do. [Worksheet 4-1](#) presents a table of key types of information to gather for each control knob, as well as likely sources of information and the common connections to health system performance.

Undertake an analysis to construct a diagnostic tree for each performance problem selected

Once the Health Reform Team has an accurate description of the health system, you can begin your analysis to reveal the root causes of a selected problem. *GHRR* advises the use of a “diagnostic tree” to systematically map different “branches” of various causes that contribute to your selected performance problem. Starting with the performance problem and then working backward to seek underlying causes, leads you in the direction of generating potential solutions.

A common pitfall when doing diagnosis is confusing the symptoms with the causes of a problem. One way to avoid such confusion is to ask “why” five times in order to work your way from a problem to its causes. Repeating the question “why” pushes you to discover causes that lie behind and beneath the obvious symptoms (Serrat, 2009; American Society for Quality).

Answering each “why” is not a simple process. Answers should be based on well-defined theory, analytical logic and, when possible, evidence, data, and prior studies in the scientific literature. The appropriate theories, analytical logic, and data for a diagnostic analysis will be determined by the performance problems being examined and the probable underlying causes of poor performance. Depending on the problem under examination and the specific situation, the Health Reform Team may decide to undertake (or commission) additional studies to further explore the causes of some performance problems. Getting a good grasp on the probable causes of critical problems is important, because it shapes decisions about what to do to improve performance.

Returning to the example of the Odisha Health System Assessment, consider a diagnostic process of the causes of the problem of low financial risk protection, as indicated by the high out-of-pocket expenses (OOPE) documented during the performance assessment (Haakenstad et al., 2022). During the assessment, it was determined that the majority of OOPE is spent on medicines. Figures 4-1A and 4-1B below provide two simplified diagnostic trees (more detailed versions of these diagnostic trees are included in [Appendix 4-1](#)) that result from asking “why” multiple times. They show that the problem of high out-of-pocket expenses has several levels of causes. Keep in mind: these two diagnostic trees are only indicative—there are other possible causes, and other diagnostic trees, that the Health Reform Team could consider.

These illustrative diagnostic trees trace two possible causes of low protection from healthcare-related financial risk: (1) Figure 4-1A addresses inadequate insurance coverage; (2) Figure 4-1B addresses high OOPE on outpatient care in the public and private sectors. We repeatedly ask “why” a particular problem exists in order to work our way backwards through the chain of causality,

using theories, logic, experiences from other contexts and local data to identify the answers at each branching point of the diagnostic tree. We continue asking “why” until we reach one of the five policy control knobs—financing, organization, payment, regulation, or persuasion—as a possible root cause for the performance problem.

It is essential to continue asking “why” until you reach the policy control knobs because they represent ways of addressing the performance problem through health reform interventions. When you examine Figures 4-1A and 4-1B, you will notice that we only arrive at causes related to the policy control knobs on the fourth or fifth branch of “why.” With these causes identified, we can move to Step Five to identify possible health reform interventions, based on the five policy areas, to address the performance problem.

Figure 4-1A: Sample diagnostic tree diagnosing causes of low financial risk protection, 1st branch

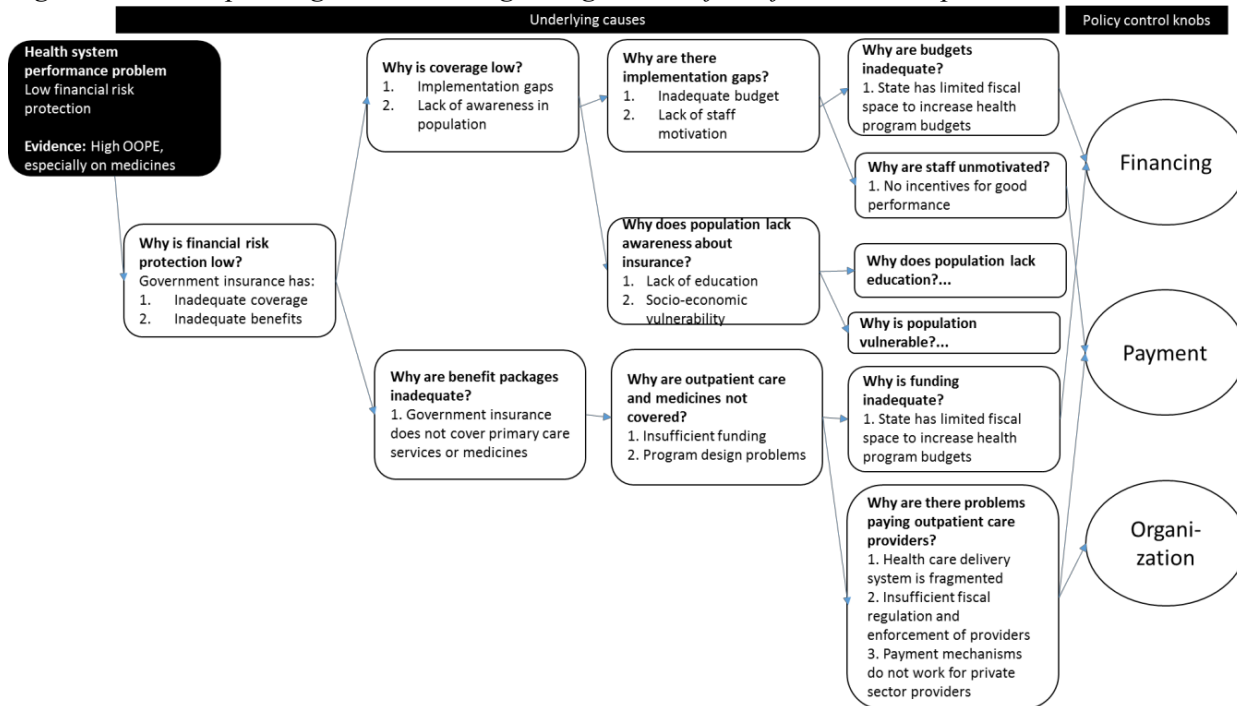
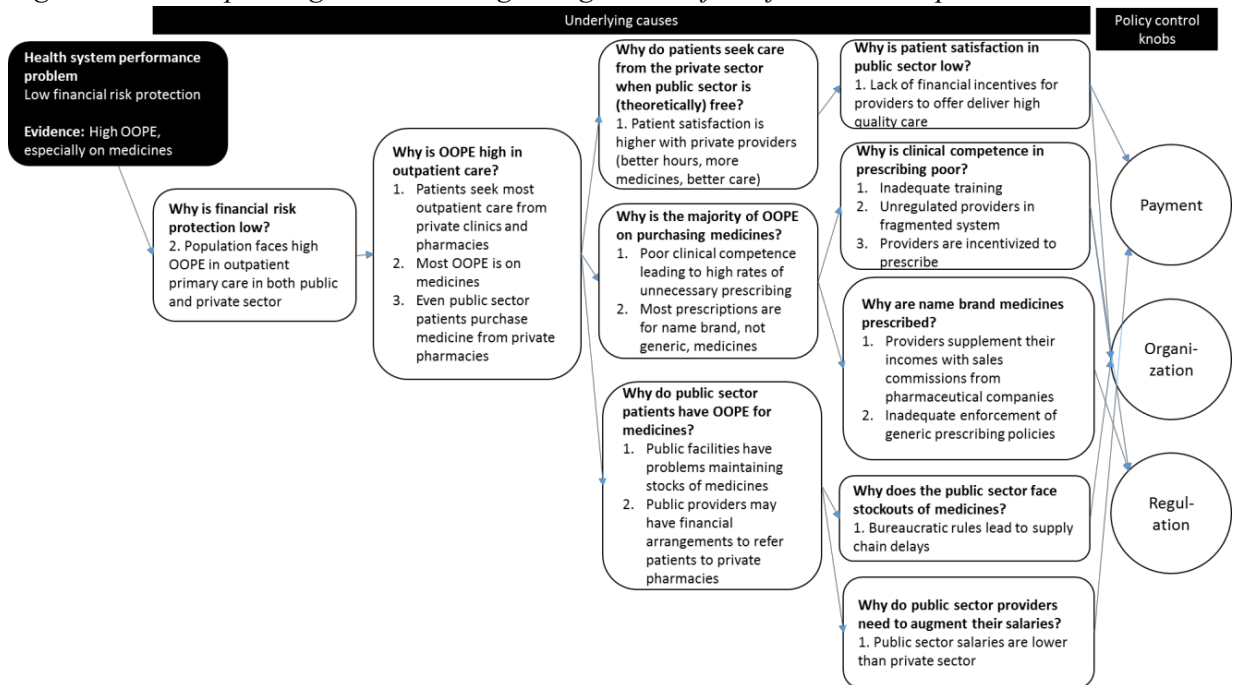


Figure 4-1B: Sample diagnostic tree diagnosing causes of low financial risk protection, 2nd branch



Apply a Systems Approach

Regardless of which analysis you are conducting (including performance assessments, health care system descriptions, and diagnostic trees), the *GHRR* framework emphasizes the importance of using *a systems approach*. This means considering how each indicator or outcome measure relates to multiple different aspects of the health system. Taking a systems approach generally leads you to identify multiple causes for performance problems and multiple interventions to improve performance.

It is especially essential to take a systems approach in diagnosis. The root causes of most problems do not lie in only one single policy control knob. Instead, the underlying causes are typically systemic. This is evident in the Odisha example. Patients are choosing to use private pharmacies rather than going to public clinics, because public clinics do not have convenient opening hours and do not stock the medicines the patients want. Instead, they visit private pharmacies, even though these stores are largely unregulated in both quality and pricing. Private pharmacies generate supplier-induced demand, and sell patients unnecessary and expensive medicines. Why are public sector opening hours inconvenient and medicines unavailable? Root causes can be traced to several sources: poor management at public hospitals, lack of incentives for doctors to show up for work in public sector facilities, and the fact that public facilities are not held accountable for performance. These factors combine to contribute to high OOPE by patients and families.

Health systems are complex and dynamic. The causes and effects of performance problems can interact, occur simultaneously, act in concert to mutually reinforce each other, or act in opposition, canceling each other out. Any given policy intervention can give rise to multiple changes, both intended and unintended. Taking a systems approach as you develop the diagnostic tree helps identify linkages among problems and causes. This will help you prepare for possible effects of the reform interventions decided next in Step Five.

Analyze linkages among causes and possible effects, and prepare for Step Five: Designing Reform Options

Our sample diagnostic trees highlight a few potential causal chains for a performance problem, demonstrating that diagnosis does not result in simple answers. Health system performance outcomes are linked to each other, as are their root causes. For example, Figure 4-1B shows how financial risk protection is linked to quality of care. Possible causes in the third level of “why” are poor quality clinical care and the prescription of multiple, and often unnecessary, medicines. Both can lead to high OOPE.

You may also notice that, while the first-level causes are different in the two figures, the final set of root causes are common at a high level of generalization. In this example, the root causes behind low financial risk protection in Odisha are traced to four of the five control knobs: financing, organization, payment, and regulation. Now that we have arrived at causes that can be addressed through government policy action, we can generate possible policy options to address the performance problem. In Step Five, we discuss how to select a package of policies for our health reform.

Once you select the policy option you will pursue, you may want to create another tree. Instead of working backward as you did above, however, in this tree you project forward from the intervention to predict how the changes in your reform are likely to affect health system performance (including both improvements and possible unintended or negative consequences that may occur).

Summary

In conclusion, Step Four enables the Health Reform Team to develop a clear understanding of why the health system is performing poorly on the selected intermediate and final outcome(s). Understanding the multiple causes does not definitively determine which reforms you should then pursue, but accurate diagnosis of the causes of the problem is a necessary step toward devising a set of potentially effective solutions.

Diagnosis thus sets the foundation for Step Five: Designing Reform Options, by helping identify the root causes for performance problems and indicating which policy controls could be used to address these problems. As with the other steps, diagnosis of performance problems may not be a one-time activity. The Health Reform Team may decide to undertake diagnoses of different performance problems at different points in time during the reform process. They might also decide to diagnose newly emerging problems in the same area of performance periodically to trace changes in root causes engendered by the policy reforms or other factors.

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Worksheet 4-1: Information required to understand the policy control knobs in the current healthcare system

Control Knob	Information Needed	Suggested data sources	Affected outcomes
Financing	<p>Resource mobilization: Figures and multi-year trends of:</p> <ul style="list-style-type: none"> • Total health expenditure (THE) per capita • THE as % of GDP • Government health expenditure (GHE) as a share of government expenditure (to assess the government’s priority given to health) • Government spending as a share of GDP (assess fiscal capacity of a country) <p>Risk pooling</p> <ul style="list-style-type: none"> • Compare % of THE from various sources, including: OOPe, GHE, social health insurance (SHI), community based insurance, private insurance, international/donor aid • How many SHI schemes are there? For each one, identify: % of the population covered; eligibility criteria; amount of premiums/contributions; who pays premiums/contributions; % of eligible population actually enrolled • If private insurance exists, in addition to the information asked for from SHI, also document: What does it typically cover (e.g. does it replace or augment public coverage)? Is it: indemnity policy, group health insurance sold via employer, rider policy for life insurance? <p>Resource allocation</p> <ul style="list-style-type: none"> • % GHE spending by type of facility (hospitals, clinics, public health, etc) • % GHE spending by function (curative, preventive, primary care, secondary/tertiary care, public health) • SHI benefit packages (what services and/or providers are covered; cost sharing) 	<p>National Health Accounts</p> <p>Government budget</p>	<p>Financial risk protection</p> <p>Equity</p>
Payment	<p>Public provider payment mechanisms</p> <ul style="list-style-type: none"> • How are public hospitals/clinics paid (by the government, SHI programs, patients, etc.)? 	<p>Interviews</p>	<p>Efficiency</p> <p>Quality</p>

Control Knob	Information Needed	Suggested data sources	Affected outcomes
	<ul style="list-style-type: none"> At public hospitals/clinics, how are healthcare personnel paid (including specialists, physicians, nurses, other staff)? What is the mix of fixed salaries and incentives? If yes, incentives are provided, how are they determined? <p>Private sector provider payment mechanisms</p> <ul style="list-style-type: none"> How are private-sector health facilities typically paid? If they are contracted/empannelled by SHI programs, how are they paid? How are personnel in the private sector typically paid (including specialists, physicians, nurses, and other staff)? How are financial incentives determined? 	SHI policy documents	
Organization	<p>The roles, scale and scope of public and private providers in healthcare delivery</p> <ul style="list-style-type: none"> Share of public, private for-profit and private not-for-profit providers' admissions/visits (at tertiary, secondary and primary levels), beds Share of inpatient services at public vs private facilities (disaggregated by urban/rural and by income level) Share of outpatient services at public vs private facilities (disaggregated by urban/rural and by income level) For inpatient services (tertiary and secondary), how do the public and private facilities differ regarding: <ul style="list-style-type: none"> Services provided (e.g. general vs. specialty) Locations Opening hours Amenities Patients' perceptions of clinical and personal quality Fees For outpatient/primary care, how do public and private differ in terms of: <ul style="list-style-type: none"> Services provided (e.g. general vs. specialty) Locations Opening hours Amenities 	<p>Government statistics</p> <p>Surveys</p> <p>Informant interviews</p>	<p>Access and (un)equal access</p> <p>Quality</p> <p>Efficiency</p>

Control Knob	Information Needed	Suggested data sources	Affected outcomes
	<ul style="list-style-type: none"> ○ Patients' perceptions of clinical and personal quality ○ Fees ○ Care provider qualifications (including informal providers) ● Why do people choose public vs private sector? ● To what extent does "dual practice" exist? ● Are there any "vertically integrated" delivery systems? If yes, describe or find a case study ● What is the distribution of different types of providers across different geographies? ● If there is SHI, do they empanel public and private providers? What are their criteria for empanelment? 		
	<p>Market Level Organization</p> <ul style="list-style-type: none"> ● Describe in general the market structure and dynamics for inpatient services. For example, are they: <ul style="list-style-type: none"> ○ Dominated by the public sector, with the private sector playing a complementary or supplementary role? ○ Dominated by a few large public and private hospitals? ○ Competitive? If so, what do they compete on? 	Existing studies Informant interviews	Efficiency Quality
	<p>Institutional Level Organization</p> <ul style="list-style-type: none"> ● Public hospitals and clinics: <ul style="list-style-type: none"> ○ What are their primary sources of funding (e.g. government budget, SHI payments, patients' direct payment)? ○ How are physicians/other staff employed? How are they paid? What promotion criteria/opportunities exist? How are positions assigned? Do they use contracts or a tenure system? Is dual practice common (and is it allowed or just occurs in practice)? ○ What autonomy do hospitals/clinics have? <ul style="list-style-type: none"> ▪ autonomy in hiring/firing staff ▪ financial autonomy (E.g., are they allowed to raise additional capital? Can they decide on use of savings 	Existing studies Organizational policy documents Informant interviews	Efficiency Quality

Control Knob	Information Needed	Suggested data sources	Affected outcomes
	<p>or investments? Do they procure and pay for their own supplies?)</p> <ul style="list-style-type: none"> ○ What is the accountability structure? What are they accountable for, to whom, and what consequences do they face? • Private (describe for-profit and not-for-profit institutional systems separately) <ul style="list-style-type: none"> ○ Who are the owners of the institutions? ○ What are the institutions' primary objectives/missions? ○ What relationship do the institutions have with the physicians and other staff? Are they contracted or employed as staff? <p>What are the arrangements for compensation, privileges, cost/revenue sharing, etc.?</p>		
Regulation	<p>What are the main government regulatory agencies and authorities involved in the health care delivery system?</p> <p>What regulations exist, and how are they enforced, (for public, private for-profit and not-for-profit, formal, and informal service providers) regarding:</p> <ul style="list-style-type: none"> • Entry • Prices/fees • Quality/safety • Advertising <p>What regulations exist, and how are they enforced, regarding pharmaceuticals?</p> <ul style="list-style-type: none"> • Is there an essential drug list? If so, set by which agencies? • How are the prices of medicines set and regulated? • How are medicines procured? • Is advertising allowed? <p>What regulations exist, and how are they enforced, for:</p> <ul style="list-style-type: none"> • SHI (if it is present) 	<p>Policy documents</p> <p>Existing analyses</p> <p>Interviews</p>	<p>Quality</p> <p>Access</p>

Control Knob	Information Needed	Suggested data sources	Affected outcomes
	<ul style="list-style-type: none"> • Significant private insurance schemes <p>How are professional associations (e.g. medical associations, hospital associations, associations of pharmaceutical manufacturers, etc.) involved in developing and enforcing regulations?</p>		
Persuasion	<p>What major government efforts (excluding financial incentives) exist to persuade various key actors (doctors, patients, general population, policy makers, etc.) to change their behaviors? Examples include:</p> <ul style="list-style-type: none"> • Public education campaigns • Social marketing campaigns • Behavior change interventions • Information dissemination on SHI eligibility, enrolment, benefit packages 	<p>Government documents/ websites Informant interviews</p>	<p>Access Quality</p>

Appendix 4-1: Expanded Versions of the Diagnostic Trees

Figure 4-1A: Expanded diagnostic trees for low financial risk protection

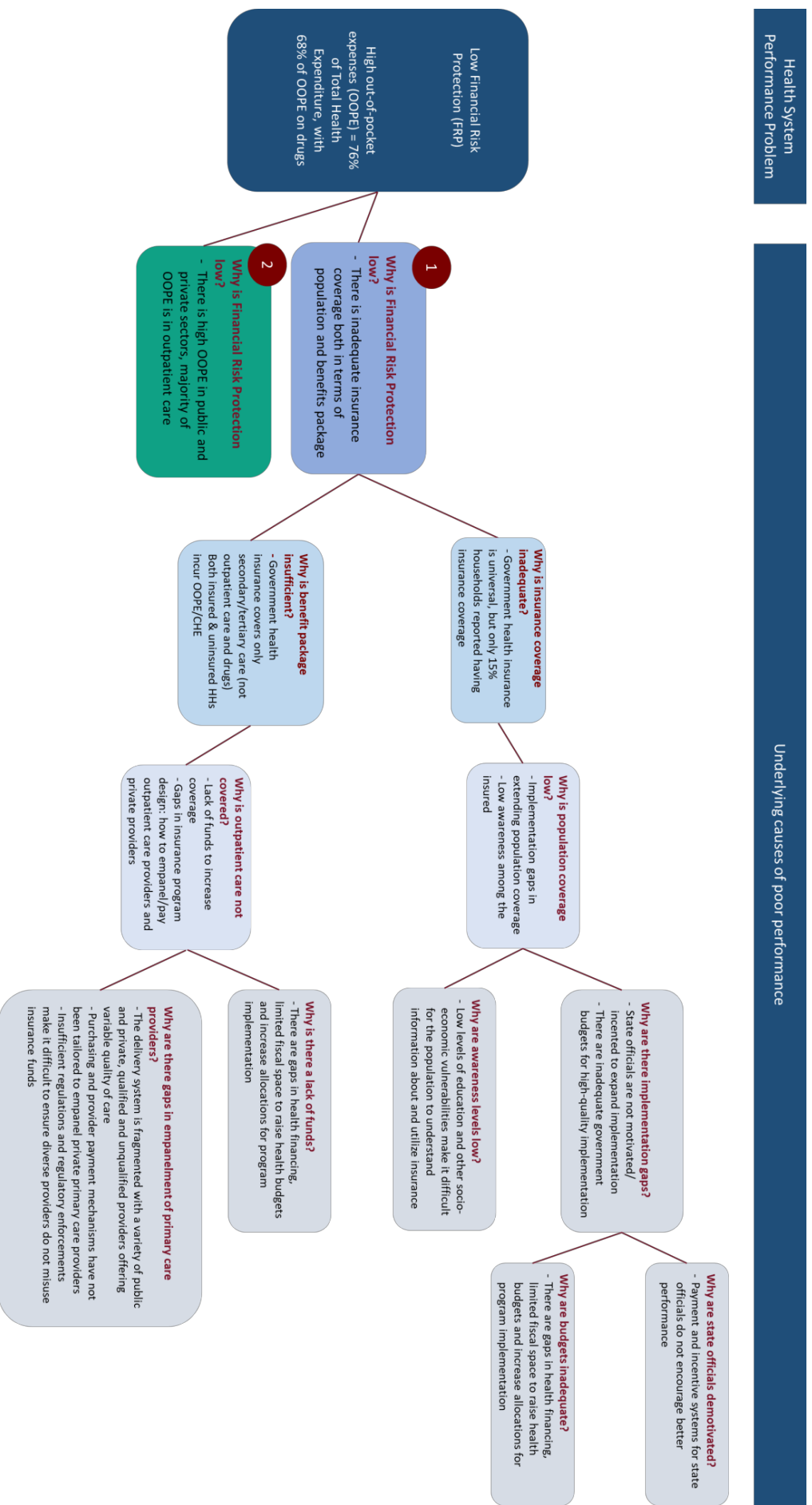


Figure 4-1B: Expanded diagnostic trees for low financial risk protection

