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Monitoring and evaluation (M&E) Training of Trainers for Regional Offices

Kathy Banke and Mirela Cami February 22, 2013

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Welcome!

- Introductions

- Objectives:
  - To learn a few adult learning and training techniques
  - To develop approaches for training regional counterparts
  - To prepare to deliver essential training materials for regional counterparts

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Expectations for today's session:

Concerns?

Training adult learners

Rank the following in order of importance to effective training:

1. The Learner
2. The Learner's Manager before the Training
3. The Learner's Manager after the Training
4. The Trainer before the Training
5. The Trainer during the Training

Answer key

1. The Learner's Manager before the Training
   - Needs to give the learner time, space, goals, select the right people for training
2. The Trainer before the Training
   - Be prepared
3. The Learner's Manager after the Training
   - Reinforce training by giving the learner opportunity and resources to use the training
4. The Trainer during the Training
5. The Learner

The Trainer is Important to Learning

Experiential Learning Techniques

Tell me ... I forget, show me ... I remember, involve me ... I understand.

- Ancient Proverb

'Involving' participants in a training workshop in an active way that incorporates their own experience is essential. Such experiential learning gives the trainees an opportunity to begin developing their skills and to receive immediate feedback. It also gives them the opportunity to participate in many of the training exercises and techniques first-hand, before they engage other peer educator trainees in such exercises.

Experiential Learning Techniques

The model includes four elements:

- **Participation –** trainer introduces a concept, and provides an exercise (or some other opportunity) for individuals to work it out
- **Reflection** on the experience – Trainer guides discussion of what was learned among participants
- **Generalization** (lessons learned) – Trainer gives information, summarizes what was learned
- **Application** of lessons learned.- Trainees practice techniques, discuss how they can best be applied in their work

The Trainer's Techniques and Tool Kit

Techniques

- Group exercises and reporting out
- Role playing – build skills and create motivation
- The boomerang – send the question back to the group for discussion
- Case studies
- Working in pairs – checking each other's work, solving problems
- Ice breakers – clear minds, wake people up!

The Trainer's Techniques and Tool Kit

Organize the day

- Set ground rules a (mute mobiles, don't go to offices, participate freely, etc.)
- Tell when there will be breaks (ideally every 1 ½ hours, 2 hours at very most); lunch; and when day will end

Participants learn from the trainer and each other

- Mix supervisors and staff together in groups
- Mix groups from different institutions and positions

The Trainer's Techniques and Tool Kit

Tools

- Powerpoint – use with caution!
- White board
- Flip charts
- Colored paper
- Note cards
- Colored markers
- Anything else?

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TOT: M&E overview module

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M&E Overview presentation

- General introduction to monitoring and evaluation
  - Definitions
  - Examples
  - How M&E helps us/why do M&E?

Small group exercise (2-3 people)

- Divide into groups of 2 or 3 people
- Review the following slides from the M&E overview module
- Work in your group to practice how you would approach delivering this material to the regional trainees
- Choose one person to do a brief (5-minute) presentation to the class (practice training approach)
- Solicit constructive feedback on the presentation from the rest of the class

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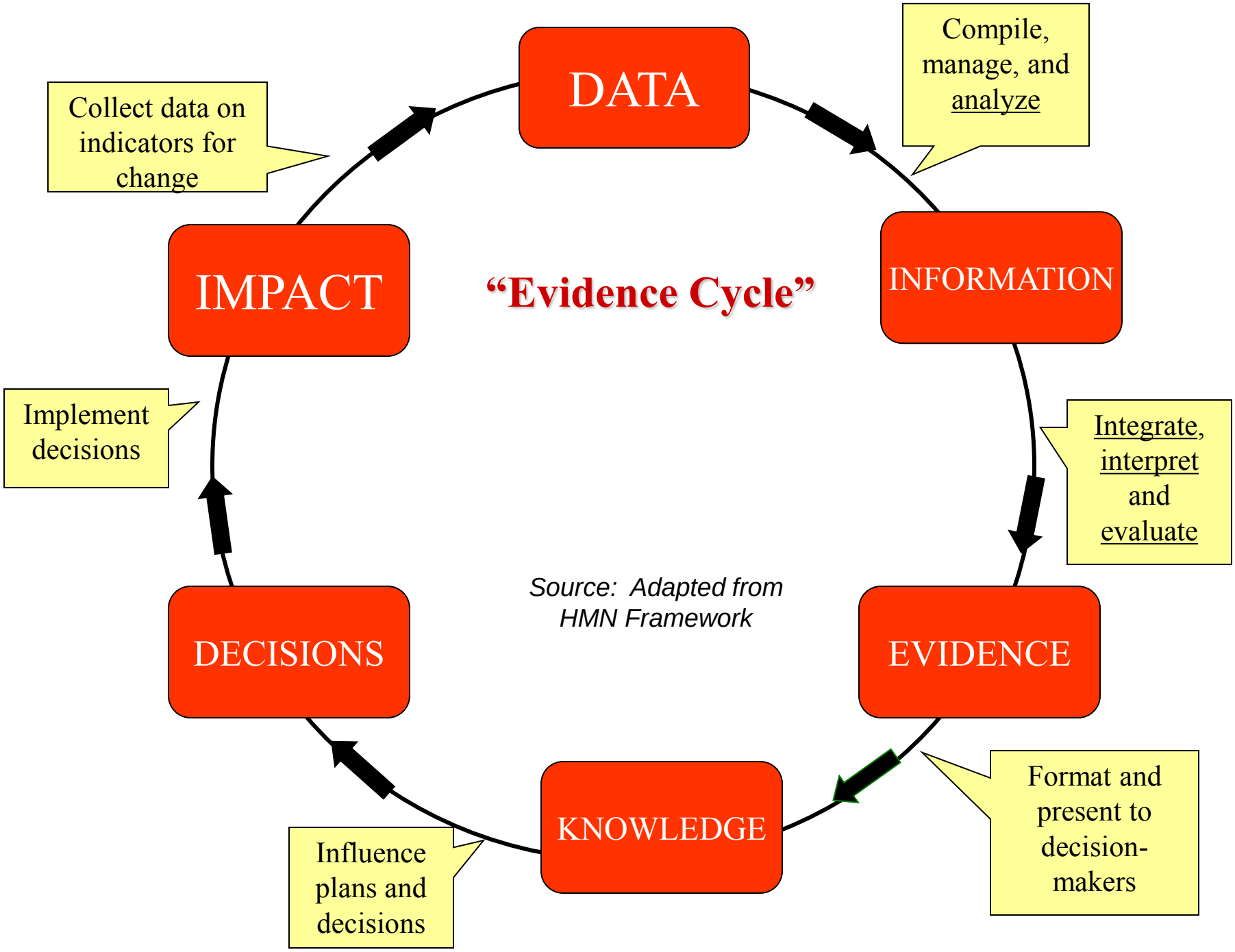
Monitoring vs. Evaluation

MONITORING

- Continuous process
- Clarify program objectives
- Link program activities to their objectives and resources
- Translate into measurable indicators/set targets
- Collect data on indicators
- Report on progress

EVALUATION

- Analyze why and how intended results were/were not achieved
- Assess contributions of activities to results
- Examine results not easily measured
- Explore unintended results
- Provide lessons learned/recommendations


DATA
Compile, manage, and analyze
INFORMATION
Integrate, interpret and evaluate
EVIDENCE
Format and present to decision-makers
KNOWLEDGE
Influence plans and decisions
DECISIONS
Implement decisions
IMPACT
Collect data on indicators for change
"Evidence Cycle"
Source: Adapted from HMN Framework

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TOT: Overview of indicators module

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Overview of indicators presentation

- What are indicators
  - Characteristics of good indicators
  - Levels of indicators
  - Examples of indicators

Small group exercise (2-3 people)

- Divide into groups of 2 or 3 people
- Review the following slides from the indicators overview module
- Work in your group to practice how you would approach delivering this material to the regional trainees
- Choose one person to do a brief (5-minute) presentation to the class (practice training approach)
- Solicit constructive feedback on the presentation from the rest of the class

Characteristics of good indicators

- Direct measures
- Objective
- Specific
- Plausible attribution
- Useful for management
- Practical/Feasible
- Disaggregated
- Reliable and reproducible
- Quantitative

(Groups: select 2-3 of these characteristics to present for the regional training)

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TOT: Structuring regional reports

Structuring regional reports

- Regions will be expected to develop regular summary reports
- National level to provide guidance on structure and content of these reports
  - Work with regional counterparts to develop initial reports

Group session

In the full group, discuss:

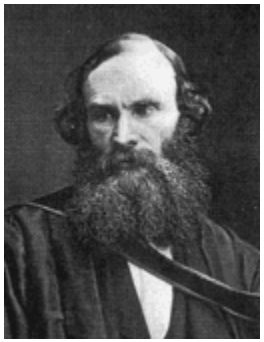
- **How should regional reports be structured**
  - **Develop template for guidance**
  - **Minimum required elements**
- **Develop plan for training regional staff on developing these reports**
- **Develop plan for supporting regional staff to develop their first report**

Session Objectives

- Define monitoring and evaluation (M&E)
- Provide examples of M&E activities
- Describe how M&E is used in national programs
- List elements of an M&E system
- Summarize Albania Health Sector Monitoring Framework

“If you cannot measure it, you cannot improve it.”

-Lord Kelvin (William Thomson), 1824-1907



Monitoring

- A continuous function that uses systematic collection of data on specified indicators to provide managers and stakeholders information on the progress on achievement of objectives and effective use of allocated funds for a strategy, policy, or program/activity."
- Tells us what is happening, but not WHY or HOW
- Early warning system
- *"The **systematic documentation** of aspects of program performance that are indicative of whether the program is **functioning as intended** or according to some appropriate standard"*

Source: Rossi, Lipsey, Freeman 2004

Evaluation

- Assessing the relevance, effectiveness and impact of a strategy, policy or program/activity as objectively and systematically as possible in relation to the expected results and outputs
- Relies on rigorous research methods
- Aim to establish causality
- *"The use of social **research methods** to systematically **investigate the effectiveness** of intervention programs [to] improve social conditions"*

Source: Rossi, Lipsey, Freeman 2004

Monitoring vs. Evaluation

MONITORING

- Continuous process
- Clarify program objectives
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EVALUATION

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M&E Examples At A Glance

Types	Key Question	Examples
Performance Monitoring	Are outputs and outcomes moving in the right direction?	% of pregnant women who received prenatal care in the first trimester
Process Evaluation	Is the program being implemented as intended?	How closely did the programs supporting prenatal care adhere to guidelines?
Impact Evaluation	Has change occurred because of the intervention?	Did the program efforts reduce maternal mortality in the target districts?

Historical role of M&E

Type of data collected

- Clinical/statistical
- Not linked to resource use
- Not available to providers/managers

Approach to data

- Compilation rather than analysis

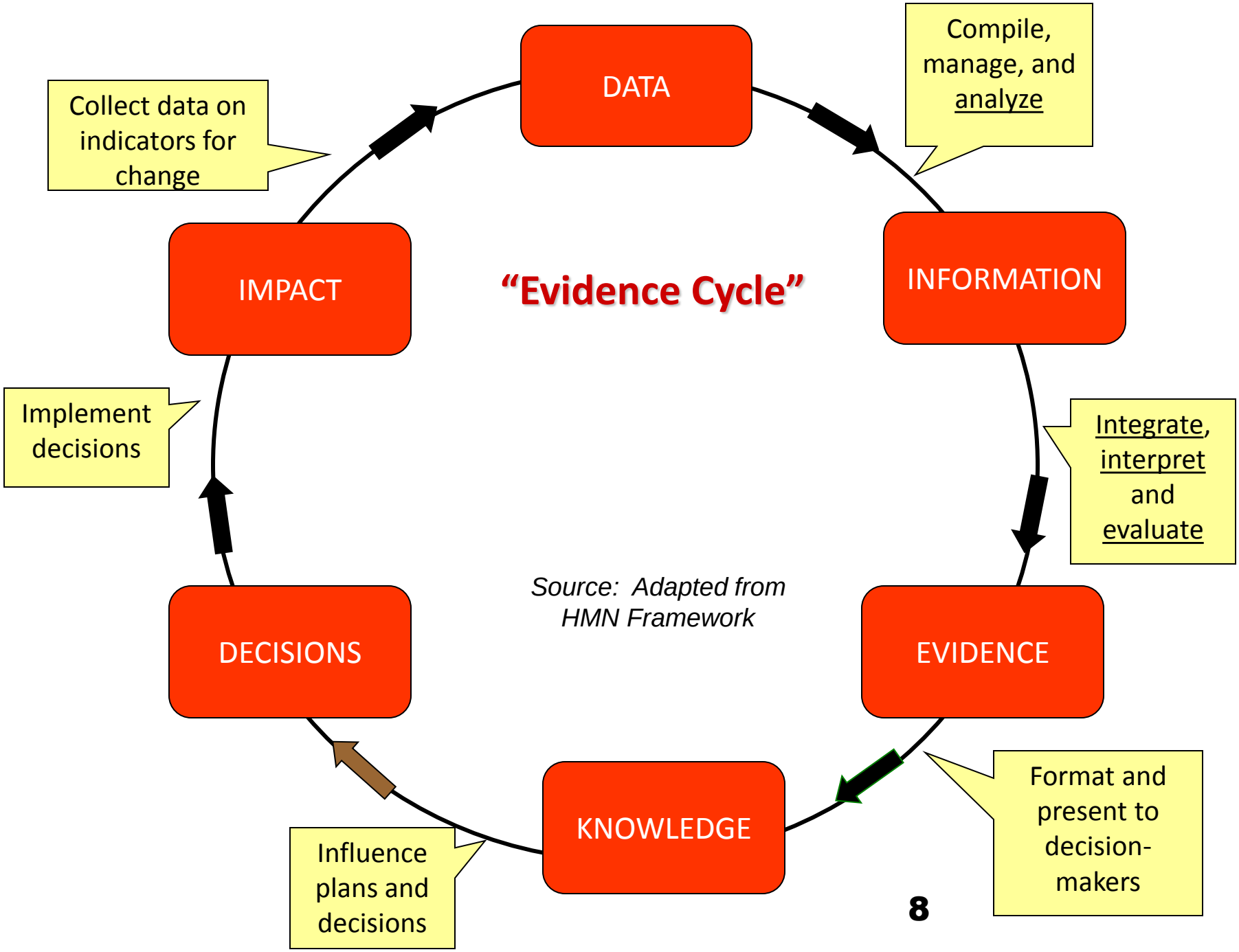
Use of data

- Monitoring and evaluation often “ad hoc” and not based on data; punitive approach

6

New approach to M&E

- Moving from the classical epidemiological approach to a managerial approach, where health data are transformed into **information and evidence**, which are an integral part of a **policy and management cycle**.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IMPACT
Collect data on indicators for change
"Evidence Cycle"
Source: Adapted from HMN Framework

Why do we do M&E?

A. We want to make sure the program stays on track

B. To find out if our approaches are effective

C. So we can say what we have accomplished over time

D. To figure out why an activity was successful so it can be replicated

E. To provide the best information available to aid policy making and decision making

F. All of the above

How M&E helps us

- Design results-oriented activities and interventions
- Efficiently collect and analyze data to track progress
- Produce accurate and timely performance reports as a basis for decision-making
- Make use of monitoring data to make mid-course corrections
- Achieve the stated results and objectives
- Generate lessons learned to inform future programs

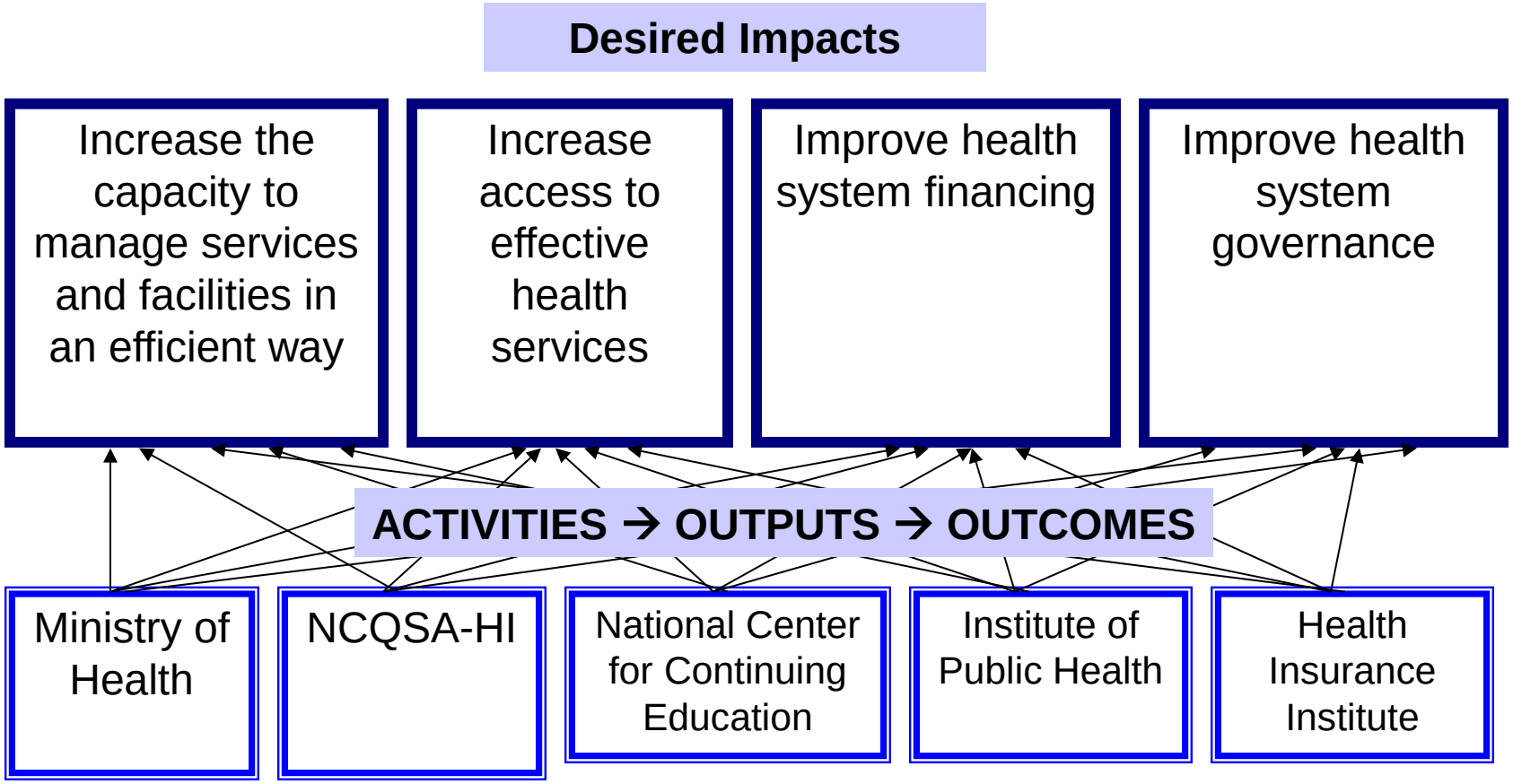
Elements in a Health Sector Monitoring System

- Framework
- Indicators
- Data sources
- Process for data analysis, interpretation, and dissemination
- Link to action

Framework: Albania Health Sector Strategy 2007-2013

- Increase the capacity to manage services and facilities in an efficient way
- Increase access to effective health services
- Improve health system financing
- Improve health system governance

Albania Health Sector Monitoring Framework



Summary

- Monitoring is the continuous process of collecting high quality data, analyzing it, and interpreting it, and communicating it to stakeholders
  - Goal: Evidence-based action
  - High quality health data are integral part of management and policy
- Evaluation
  - Research to establish causality
- Albania Health Sector Monitoring Framework
  - 4 strategic results areas (impact level)
  - Set of health system outcome indicators, data sources, institutions responsible

Questions?

Indicators

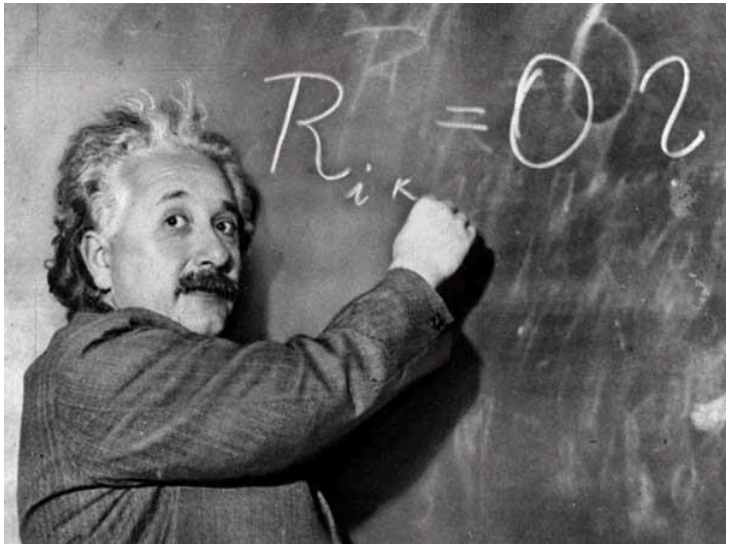
Session Objectives

- Define indicators
- Describe characteristics of good indicators
- Provide examples of indicators

What are indicators?

- An indicator is an **operational definition of a result**.
- Indicators are used to **track progress** and **measure actual results** compared to expected results
- They are usually expressed as a:
  - **Number** (#) of _____ that… (e.g., number trained)
  - **Percent** (%) of _____ that…(e.g., % reached)
  - **Binary variable** (Yes/No) or "milestone" (e.g., operational strategy produced and costed)

“Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.”



-Albert Einstein

Characteristics of good indicators

- Direct measures
- Objective
- Specific
- Plausible attribution
- Useful for management
- Practical/Feasible
- Disaggregated
- Reliable and reproducible
- Quantitative

Direct vs. Indirect/Proxy Indicators

Result	Indicator	Direct/Indirect?
Increased use of FP methods	Contraceptive prevalence rate	
Improved service delivery	# service providers trained	

Direct vs. Indirect/Proxy Indicators

Result	Indicator	Direct/Indirect?
Increased use of family planning methods	Contraceptive prevalence rate	DIRECT
Improved service delivery	# service providers trained	INDIRECT

Objective and Specific Indicators

No ambiguity about what is being measured

Result: Improved supervision by district health teams

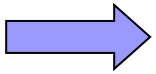
- Number of supervision teams operating successfully

  vs.

- Proportion of supervision teams conducting 100% of planned supervisory visits per quarter

Plausible Attribution

- Indicator should measure change that is wholly or at least partially due to project activities
  - If the project had not done this activity, would the indicator result be different?



If no, then choose another indicator

Useful for management

- Will the indicator results be useful for management decisions?
  - Process/output indicators useful earlier in project
  - Outcome/impact indicators not usually obtainable until later in life of project

Practical/Feasible

- Consider how the indicator data will be collected
  - Adequate personnel and resources?
  - Timely?

Disaggregated

- Whenever possible, disaggregate data by relevant variables:
  - # of providers trained
    - Male vs. female
    - Hospital level vs. clinic level
    - By region, district, etc.
  - # of clinics renovated
    - By district

Reliable and Reproducible

- **Reliable**: do we have enough confidence in these indicators to use them as a basis for management decisions?
- **Reproducible**: Are the indicators measured in a way that could be reproduced by other groups or when measured at different points in time?

Quantitative vs. Qualitative

- Quantitative indicators are often preferred
  - Numerical results easier to interpret, compare
- Qualitative indicators can enrich the numerical data and help better describe the program's impact
  - Ex: Extent of compliance with clinical guidelines
    - % of targeted clinics achieving a score of 75% or higher on compliance checklist (note conversion into quantitative indicator!)
  - Ex: Descriptive examples of health policy changes directly related to project interventions

Hospitalization rate for PHC-sensitive conditions (e.g. anemia, asthma, ulcer) for the enrolled population of each PHC center (1)

- Direct? Yes – an actual measure of chronic disease management, not a proxy
- Objective? Yes – calculated based on data
- Specific? Maybe—also may be influenced by other things
- Plausible attribution? Yes – hospitalization rate could reflect changes in case management
- Feasible? Yes—if HMIS in place

Hospitalization rate for PHC-sensitive conditions (e.g. anemia, asthma, ulcer) for the enrolled population of each PHC center (2)

- Disaggregated? Yes – by condition and PHC center (could also disaggregate by sex)
- Reliable? Maybe—there are relatively few hospitalizations, so the rate may fluctuate too much
- Quantitative? Yes
- Useful for management? Yes—should change when disease management improves or gets worse

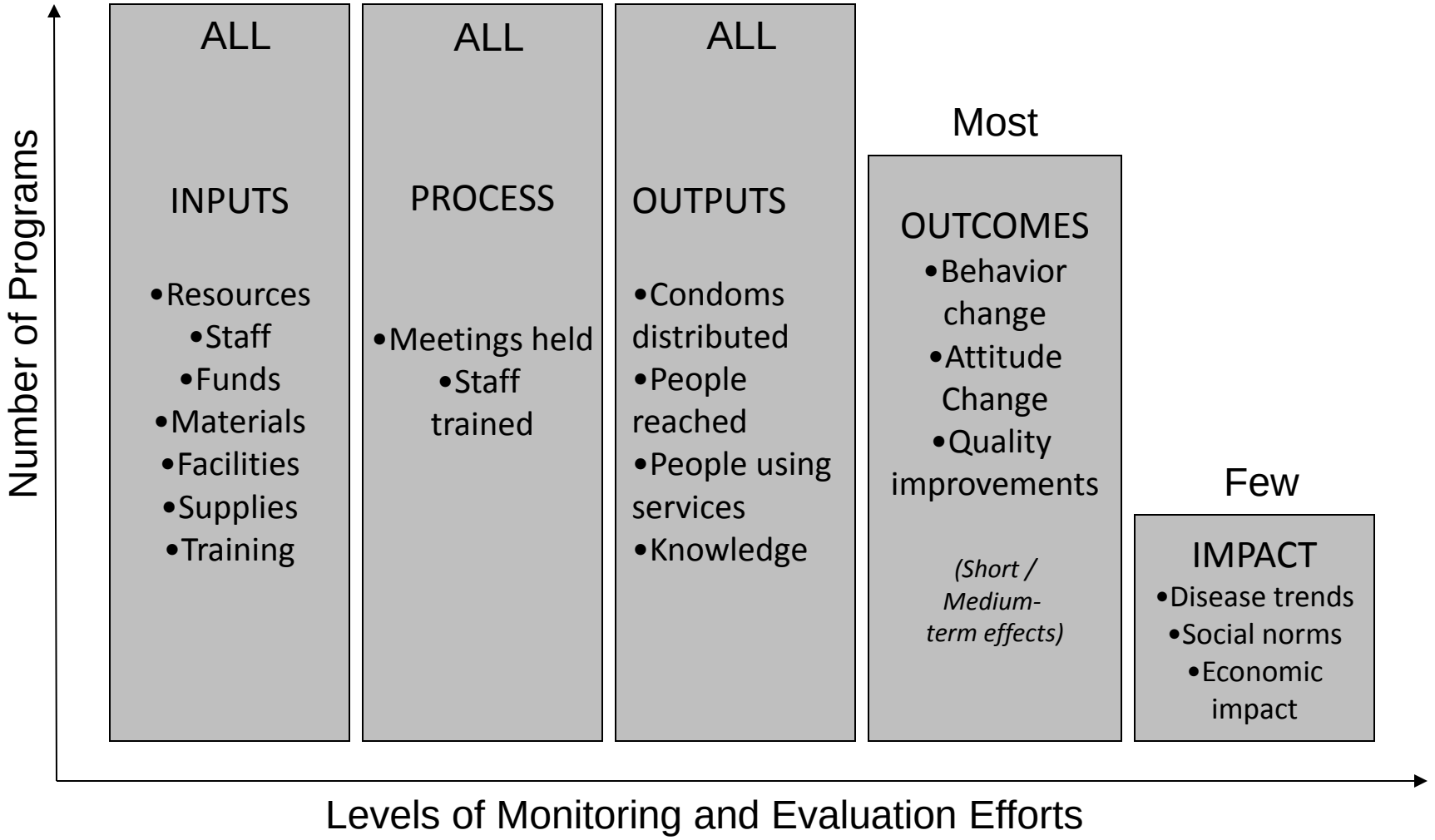
Indicator warnings

- Tendency to choose too many indicators
- Poorly-defined indicators can give inaccurate picture of what is really going on and can even mislead
- Often a trade-off between the optimal indicators and the ones that can use existing data
- Indicators should evolve over time – as targets are reached, as priorities change, as data sources change, etc.

Levels of Indicators

- (Inputs)
- Process
- Output
- Outcome
- Impact

Levels of Indicators



Adapted from FHI Monitoring and Evaluation Training module (2004)

Input Indicators

- Resources going into conducting and carrying out the project or program
  - Staff, finance, materials, time

Process Indicators

- Indicators related to specific project activities under each result
  - Number of people trained
  - Number of meetings held
  - Number of documents disseminated

Output Indicators

- A tangible, immediate and intended result of an activity
  - Number of clients provided with services
  - Number of commodities distributed
  - Number of people reached with project communications messages
  - Proportion of clients reporting satisfaction with provider interaction
  - Proportion of targeted clinics with at least four modern contraceptive methods available

Outcome indicators

- Outcomes (results) directly attributable to the project's activities
- Short- and medium-term outcomes
  - Number or proportion of people who demonstrate changes in specific behaviors
  - Proportion of births attended by skilled birth attendants
  - Proportion of targeted women who demonstrate improved attitudes towards hormonal contraceptive methods

Impact Indicators

- Highest level of indicator
- Long-term results generated by program
  - Usually several different projects contribute to these indicators, not just one project
- Examples
  - HIV seroprevalence rate among 15-49 year old women
  - Infant mortality rate
  - Total fertility rate

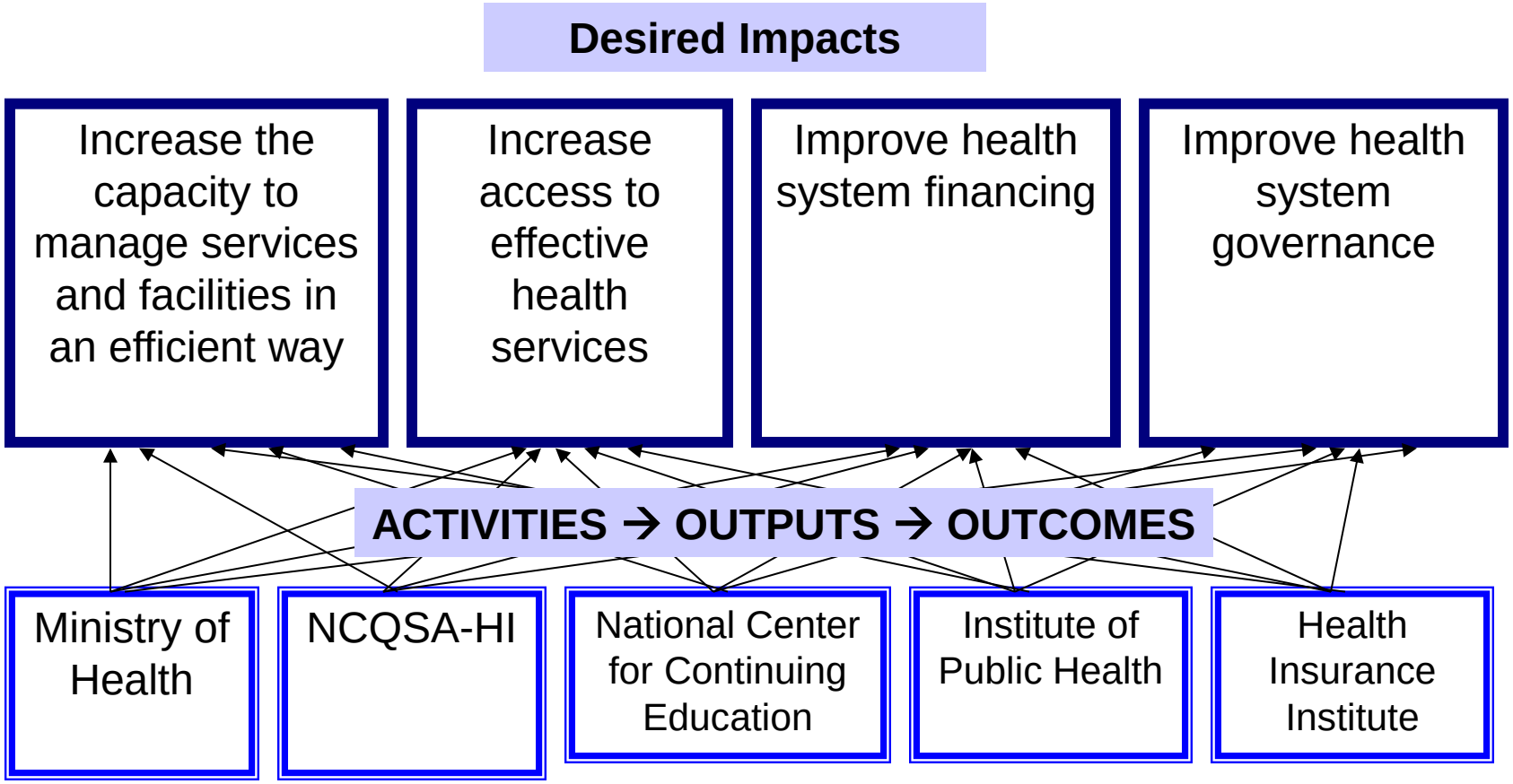
Indicator Examples (Impact, Outcome, Output, Process)

- Number of referrals to voluntary counseling and testing sites
- Number of facility staff trained
- % of target audience aware that zinc is appropriate treatment for pediatric diarrhea
- % of women in target clinics accepting a modern family planning method
- Malaria case fatality rate

Indicator Examples (Impact, Outcome, Output, Process)

- Number of referrals to voluntary counseling and testing sites
  - Output
- Number of facility staff trained
  - Process
- % of target audience aware that zinc is appropriate treatment for pediatric diarrhea
  - Output
- % of women in target clinics accepting a modern family planning method
  - Outcome
- Malaria case fatality rate
  - Impact

Framework—Albania Health Sector Monitoring



Questions?

Small group exercise: Indicators

Small group exercise

- Choose ONE of the illustrative activities listed on the next slide to achieve the associated result
- For the activity you select, work in groups of 2 or 3 people to come up with four indicators that will illustrate the link between the activity and the result.
- Include one of each type of indicator:
    - Process
    - Output
    - Outcome
    - Impact
- Be prepared to describe the causal pathway.

Result: ***Increased utilization of skilled delivery during birth***

Illustrative Activities (Choose ONE):

- Identify, recruit, and train peer educators and adult mentors to communicate with adolescents
- Establish service delivery networks to address delays in referrals to qualified health providers
- Assist in-service training for new midwives

Small group exercise

- For the activity you selected, work in groups of 2 or 3 people to come up with four indicators that will illustrate the link between the activity and the result.
- Include one of each type of indicator:
    - Process
    - Output
    - Outcome
    - Impact
- Be prepared to describe the causal pathway.

Analyzing indicator data

Session Objectives

- List uses for health information
- Organize, summarize, and display health indicator data using tables, graphs, charts, and maps
- Analyze data to show trends over time
- Analyze data comparing places or facility types

Data vs. information

- Data: no inherent meaning
- Data analysis → identification of patterns → information
- Information → recommendations, behavior change → knowledge

Evidence-based decision-making

- To inform decision-making and policy, data must be:
  - Timely
  - Accurate
  - Relevant

How is health information used?

- strategic planning and the setting of priorities
- clinical diagnosis and management of illness or injury
- quality assurance and quality improvement for health services
- detection and control of emerging and endemic disease
- human resource management
- procurement and management of health commodities (including drugs, vaccines, and diagnostics)
- regulation of toxic exposures
- program evaluation, research, and other types of policies and program
- accountability for the allocation and use of resources for health
- advocacy for increased financing for health programs
- track progress towards MDGs or donor-supported programs

Analyzing indicators: simple ways to display data

- Tables
- Pie charts
- Bar graphs
- Line graphs
- Maps

Tables

Clear title

Column headings

Distribution of number of HIV tests during 2011, by institution and test type

Institution	Voluntary tests	Recommended tests	Blood donations	TOTAL
PHI	316	930	0	1246
Districts VCT (12)	1060	0	0	1060
NCBT	0	0	22745	22745
Ambulatory Clinics	301	653	0	954
TOTAL	**1677**	**1583**	**22745**	**26005**

Source: PHI (Health Situation and Health Care, Achievements and Future Directions (2011) – draft report)

Totals add up correctly

Tables…adding percentages (1)

Distribution of institutions conducting HIV tests during 2011, by test type

Institution	Voluntary tests	Recommended tests	Blood donations	TOTAL
PHI	316 (18.8%)	930 (58.7%)	0%	1246 (4.8%)
Districts VCT (12)	1060 (63.2%)	0%	0%	1060 (4.1%)
NCBT	0%	0%	22745 (100%)	22745 (87.5%)
Ambulatory Clinics	301 (17.9%)	653 (41.3%)	0%	954 (3.7%)
TOTAL	**1677 (100%)**	**1583 (100%)**	**22745 (100%)**	**26005 (100%)**

Source: PHI (Health Situation and Health Care, Achievements and Future Directions (2011) – draft report)

Tables…adding percentages (2)

Distribution of type of HIV tests conducted during 2011, by institution

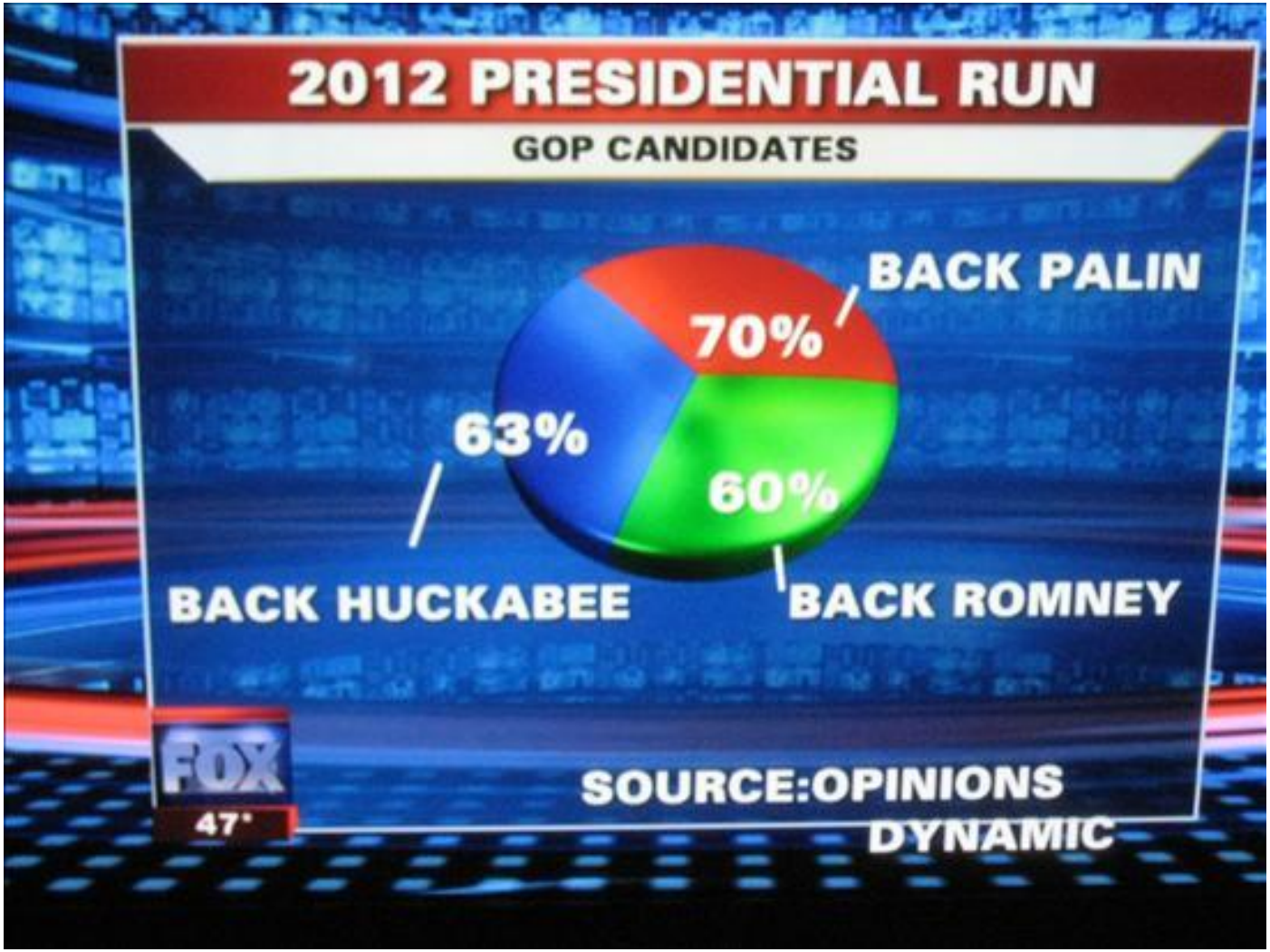
Institution	Voluntary tests	Recommended tests	Blood donations	TOTAL
PHI	316 (25.4%)	930 (74.6%)	0%	1246 (100%)
Districts VCT (12)	1060 (100%)	0%	0%	1060 (100%)
NCBT	0%	0%	22745 (100%)	22745 (100%)
Ambulatory Clinics	301 (31.6%)	653 (68.4%)	0%	954 (100%)
TOTAL	**1677 (6.4%)**	**1583 (6.1%)**	**22745 (87.5%)**	**26005 (100%)**

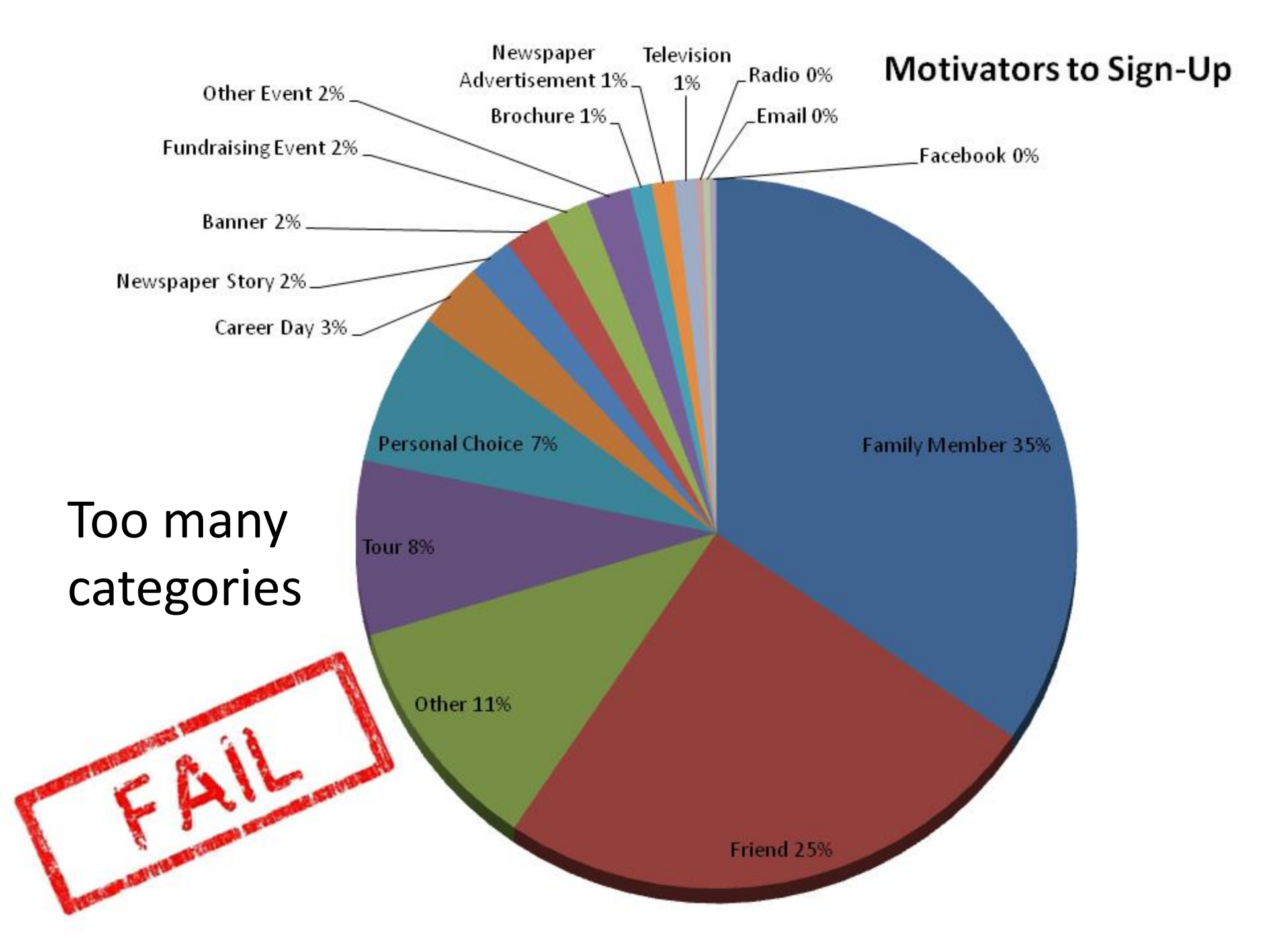
Source: PHI (Health Situation and Health Care, Achievements and Future Directions (2011) – draft report)

Pie charts

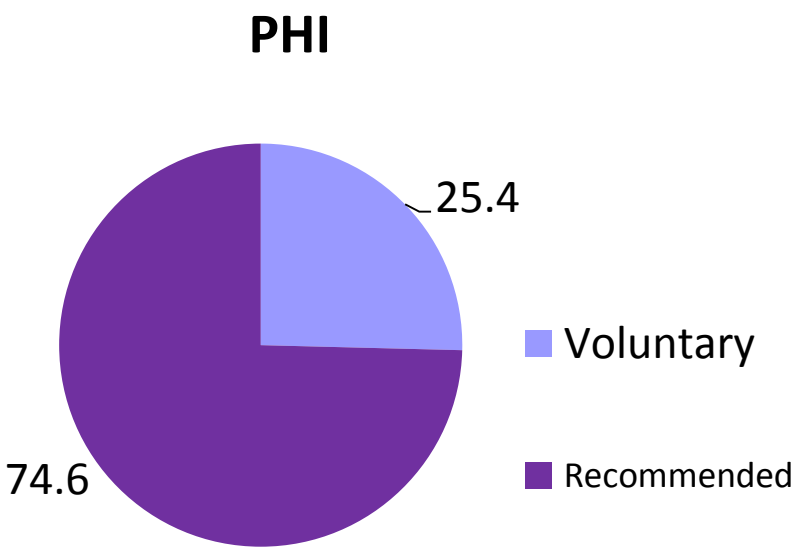
- Show parts of a whole
- Each slice is a mutually exclusive category
- Can only look at one variable at a time
- Avoid 3-D effects and shadows
- Hard to read if more than 5-6 categories (slices)
- Printing out in black and white? Hard to distinguish colors
- Generally avoid pie charts in most cases

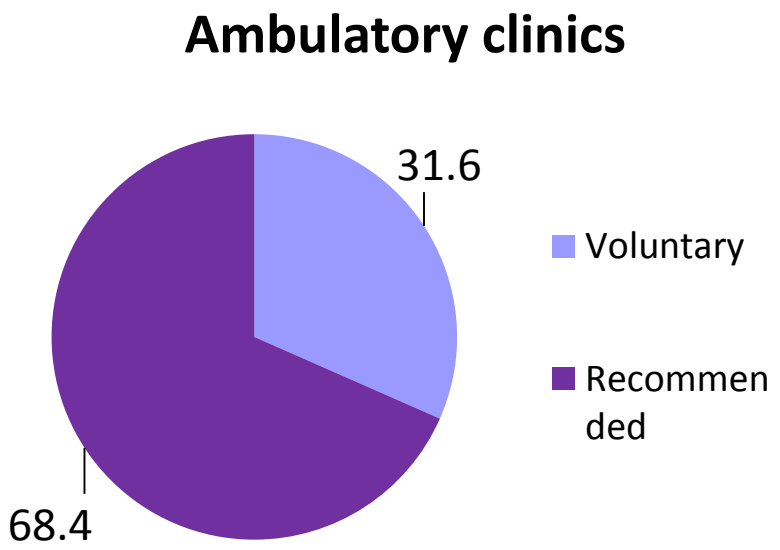
What is wrong with this pie chart?




Motivators to Sign-Up
Newspaper Advertisement 1%
Television 1%
Radio 0%
Email 0%
Facebook 0%
Other Event 2%
Brochure 1%
Fundraising Event 2%
Banner 2%
Newspaper Story 2%
Career Day 3%
Personal Choice 7%
Family Member 35%
Tour 8%
Other 11%
Friend 25%
Too many categories
FAIL

Compare proportion of types of HIV tests conducted at PHI vs. ambulatory clinics in 2011



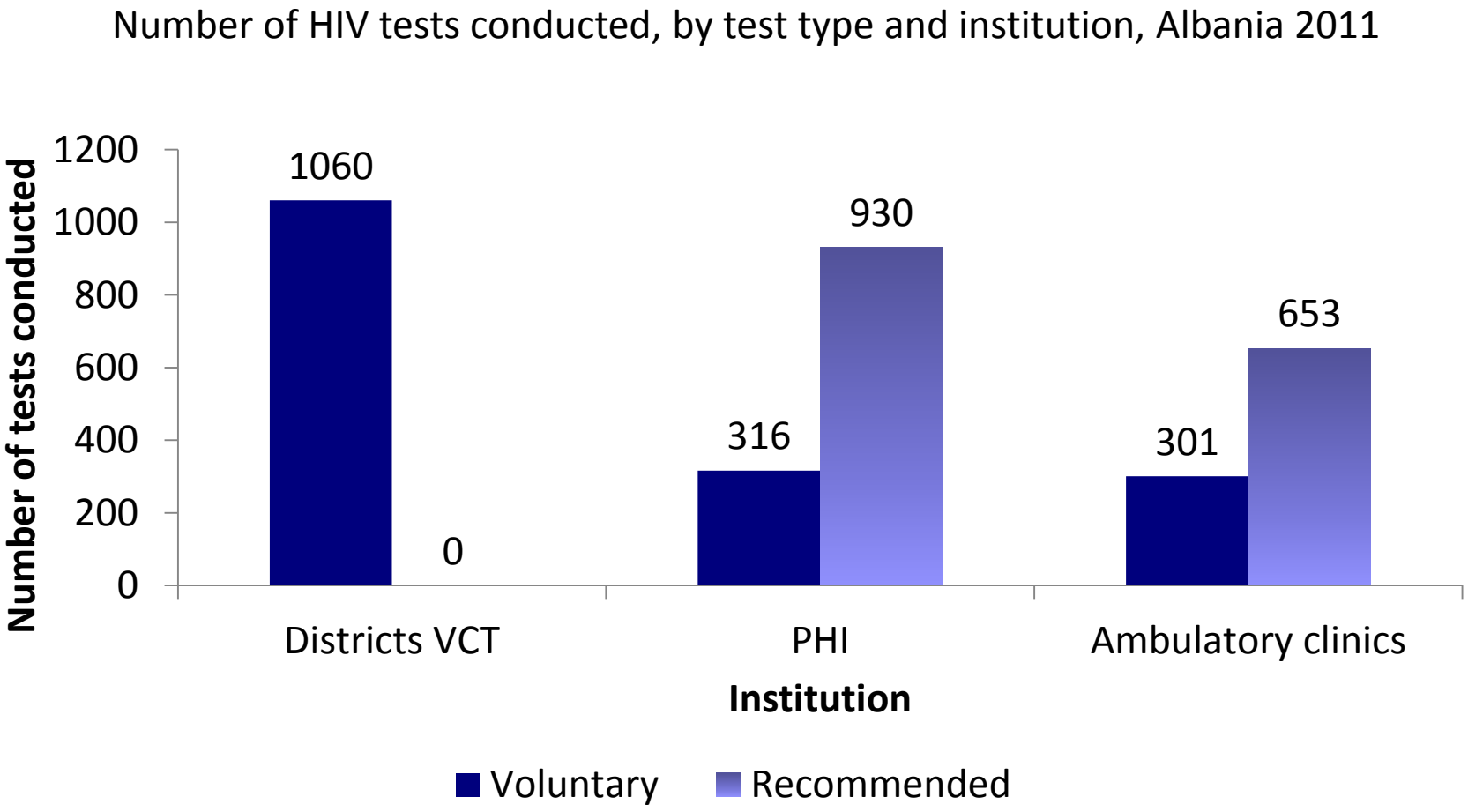


Note, it is difficult for readers to judge the relative size of different slices across more than one pie chart – all of this information can be more clearly presented in a bar chart!

Bar charts/graphs

- Comparisons made visually easier
  - Compare facilities, facility types, geographic regions, etc.
- Each category represented by a bar
- Do not use 3-D or extra effects – keep it clean, concise, and clear
- Do not use background grid lines
- Put legend at top or bottom so more space available for graph

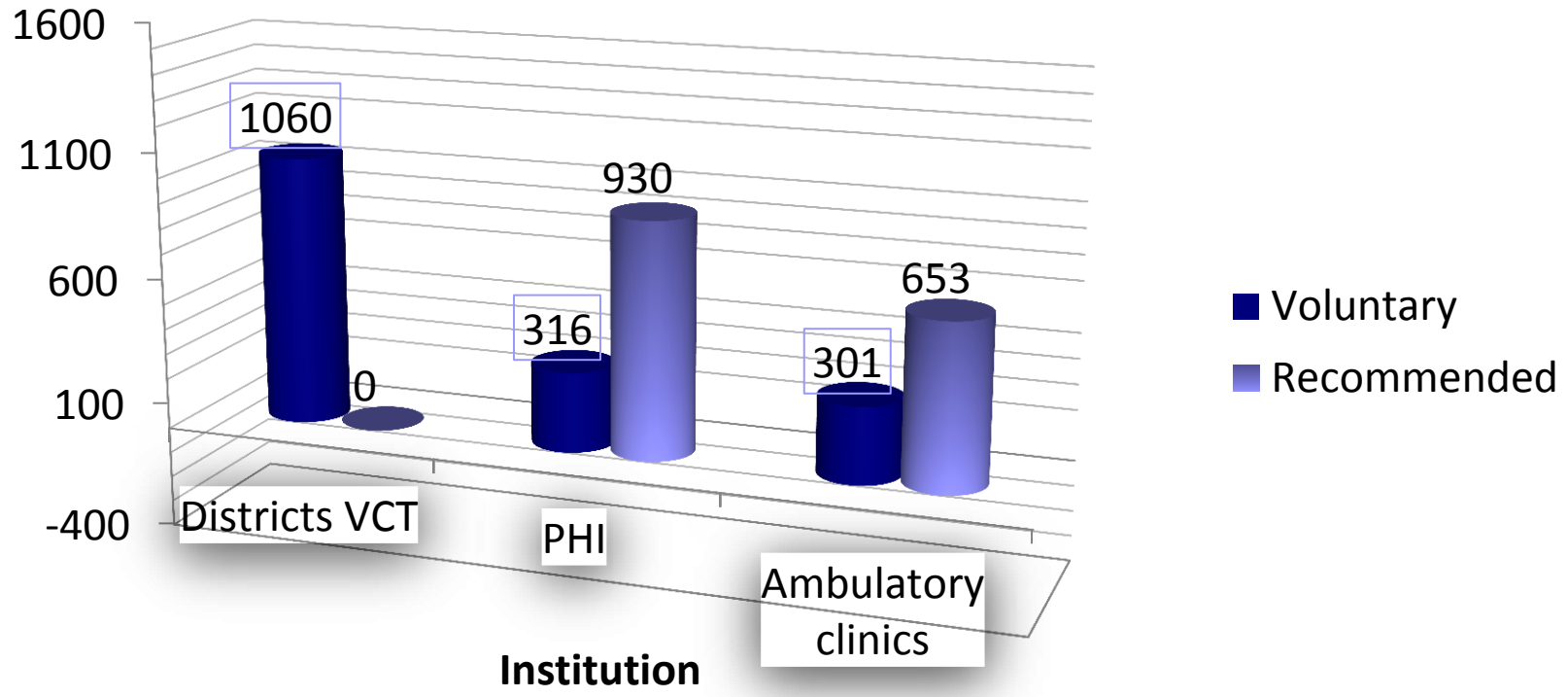
Bar charts/graphs – a good example



Components of a good bar chart

- Label the x- and y-axis
- X-axis is usually 0. (Rare exceptions okay.)
- Add data values above bars (if not too cluttered)
- Put category labels legend at bottom or top so you have more space horizontally for data display
- Provide concise title that describes what data are in the chart

Bar charts/graphs – Bad example



Avoid: 3-D effects, background grid lines, rotated axis, x-axis does not start at 0, no title or y-axis label

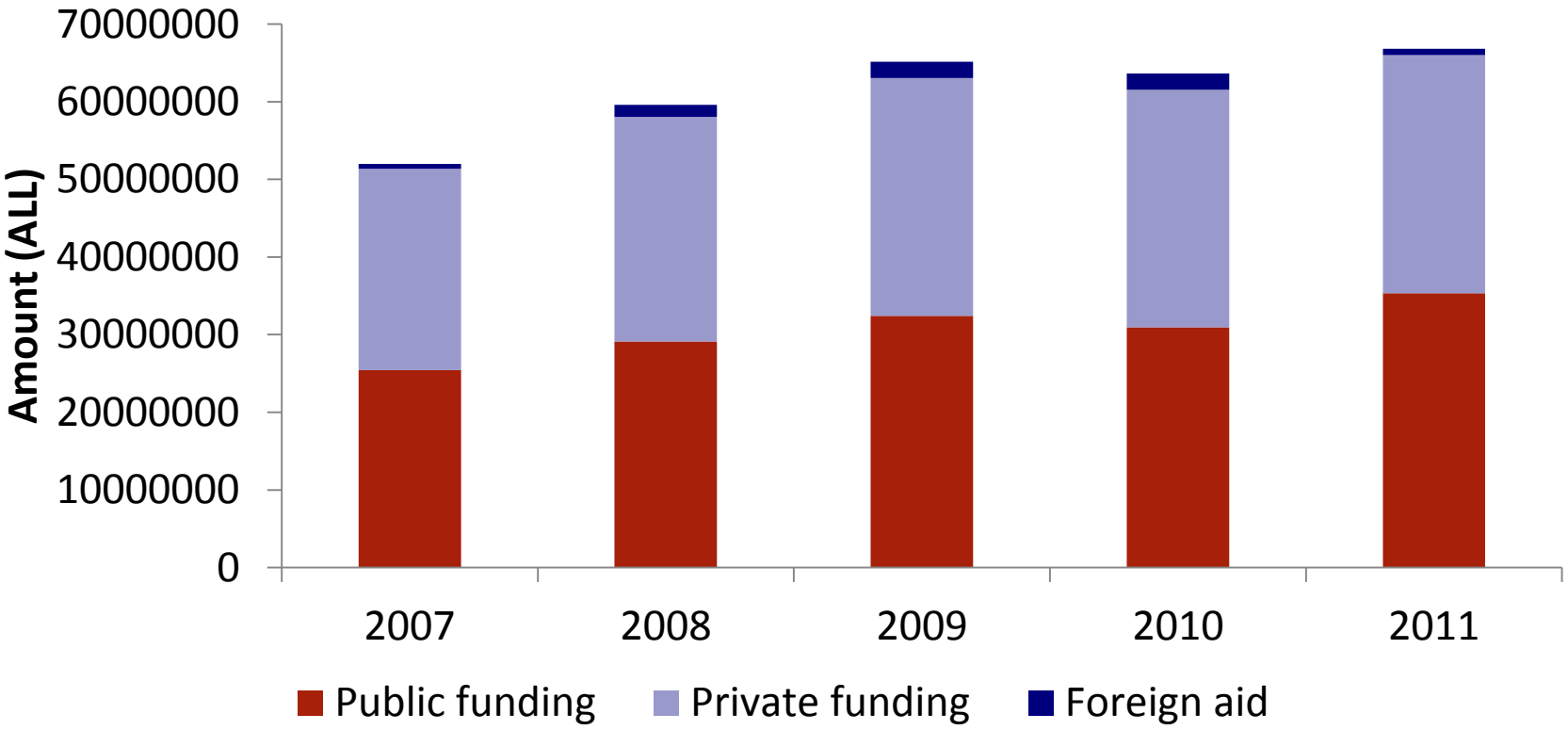
Albania health expenses, 2007-2011

Type	2007	2008	2009	2010	2011
Public funding	25.441.700	29.112.314	32.414.293	30.950.000	35.353.473
Private funding	25.940.352	28.923.492	30.647.333	30.600.000	30.647.333
Foreign aid	622.926	1.582.959	2.104.734	2.104.000	808.780
Total	52.004.977	59.618.766	65.166.360	63.654.000	66.809.586

Source: National Health Accounts/Finance Directorate in the MoH

How else could we present this data?

Albania health expenses, 2007-2011

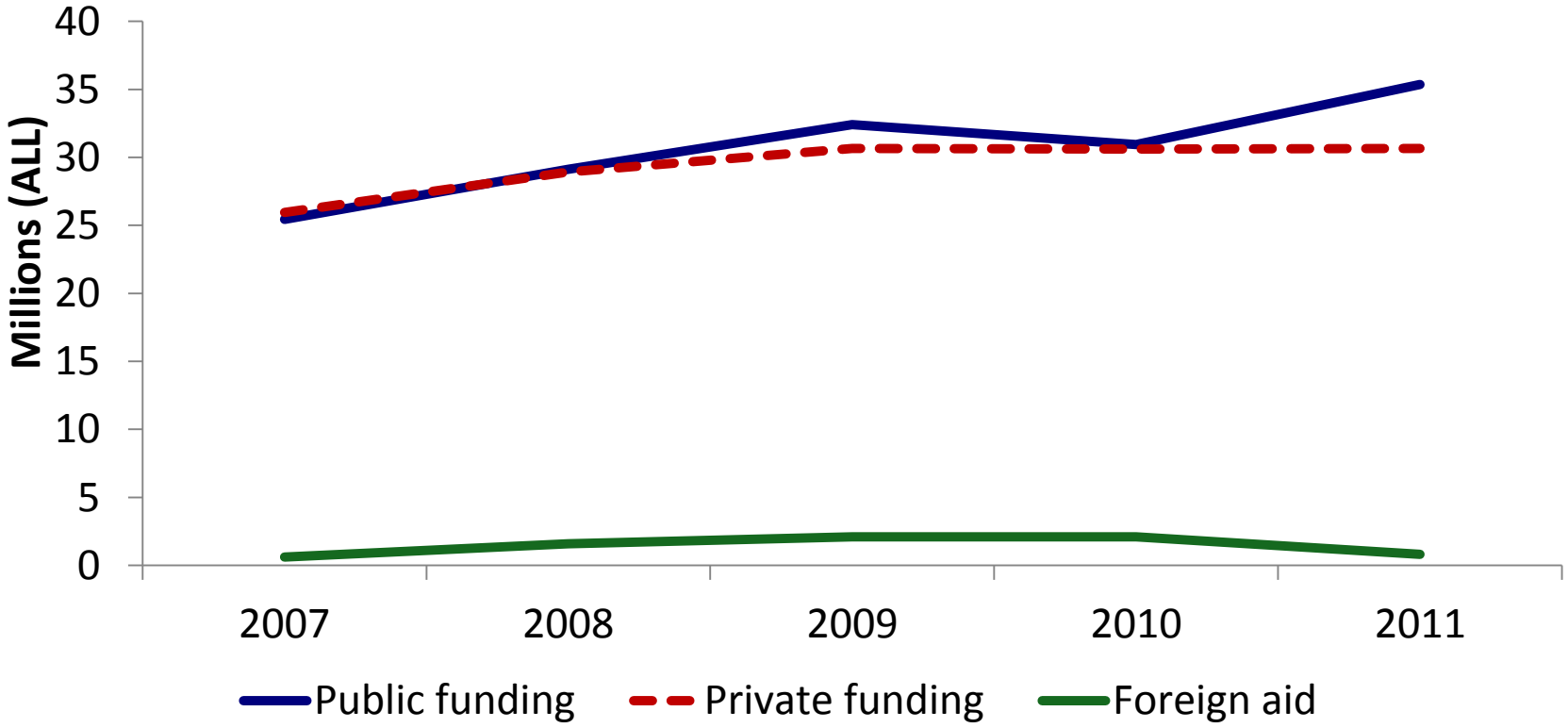


Source: National Health Accounts/Finance Directorate in the MoH

Line charts

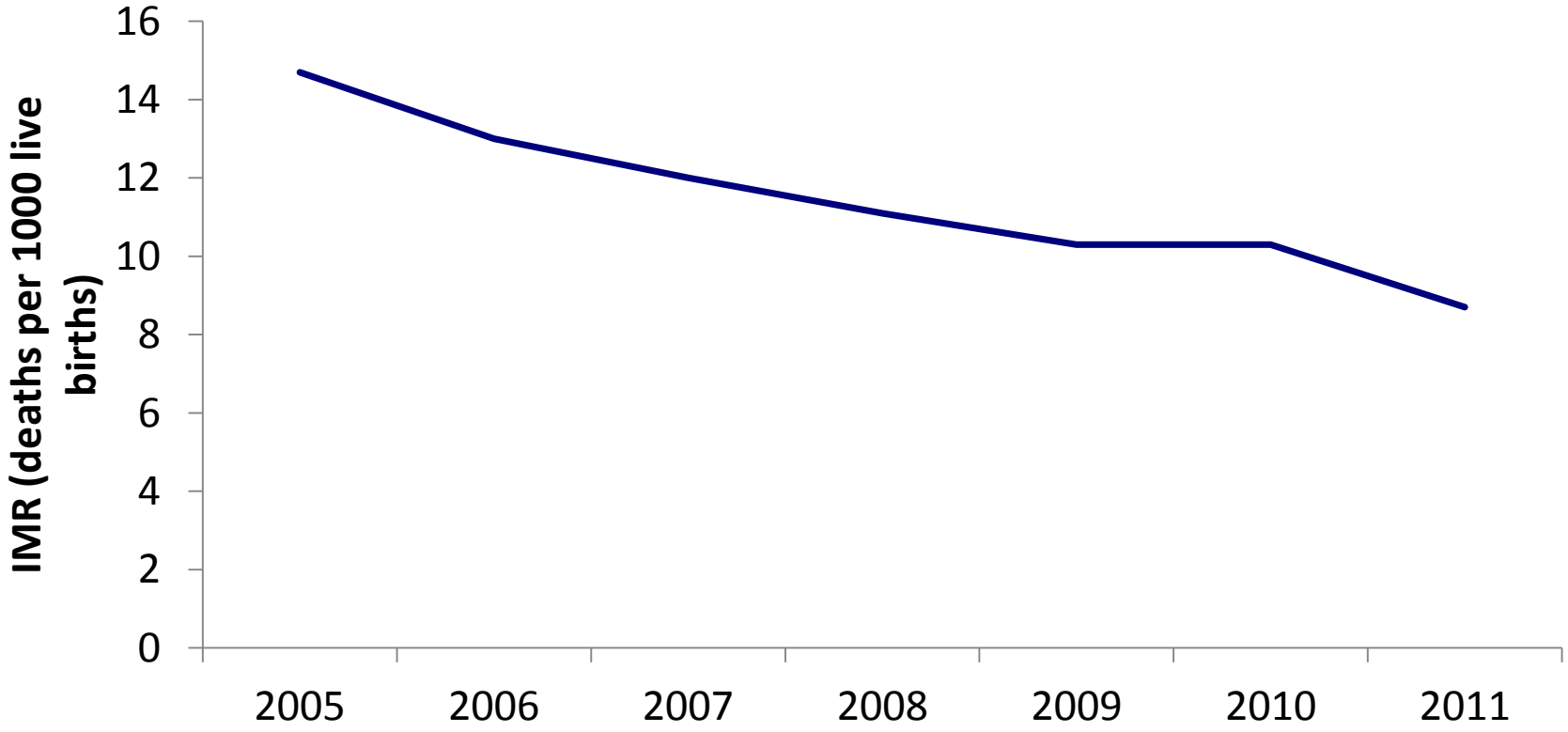
- Appropriate for continuous data, not categorical data
  - Examples: Time, age, income
- Usually appropriate when comparing data over time (months, years) – put time variable on the x-axis
- Show data trends clearly

Albania health expenses, 2007-2011, by type of funding



Source: National Health Accounts/Finance Directorate in the MoH

Infant mortality rate, Albania, 2005-2011

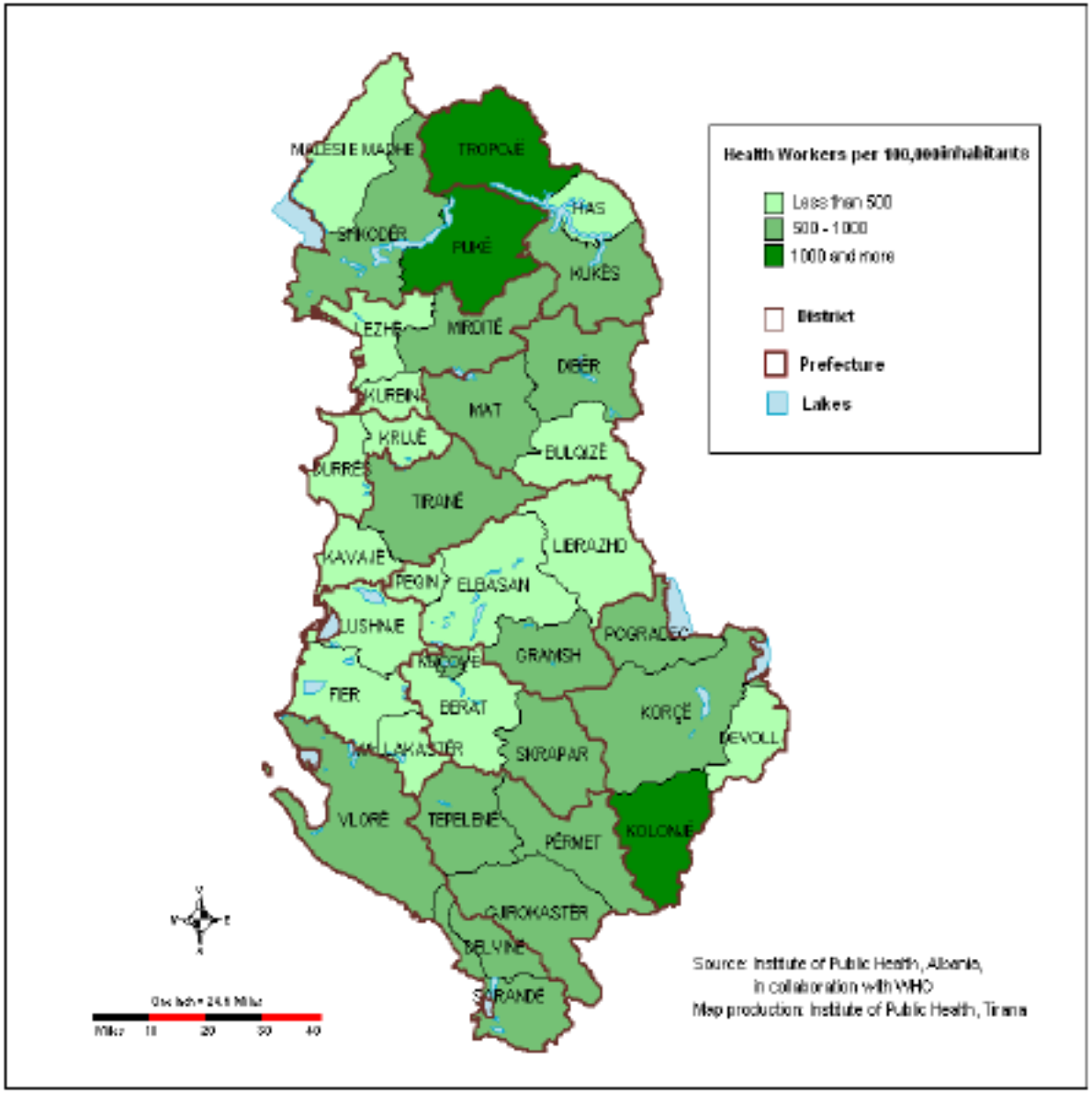


Which type(s) of chart would be most appropriate?

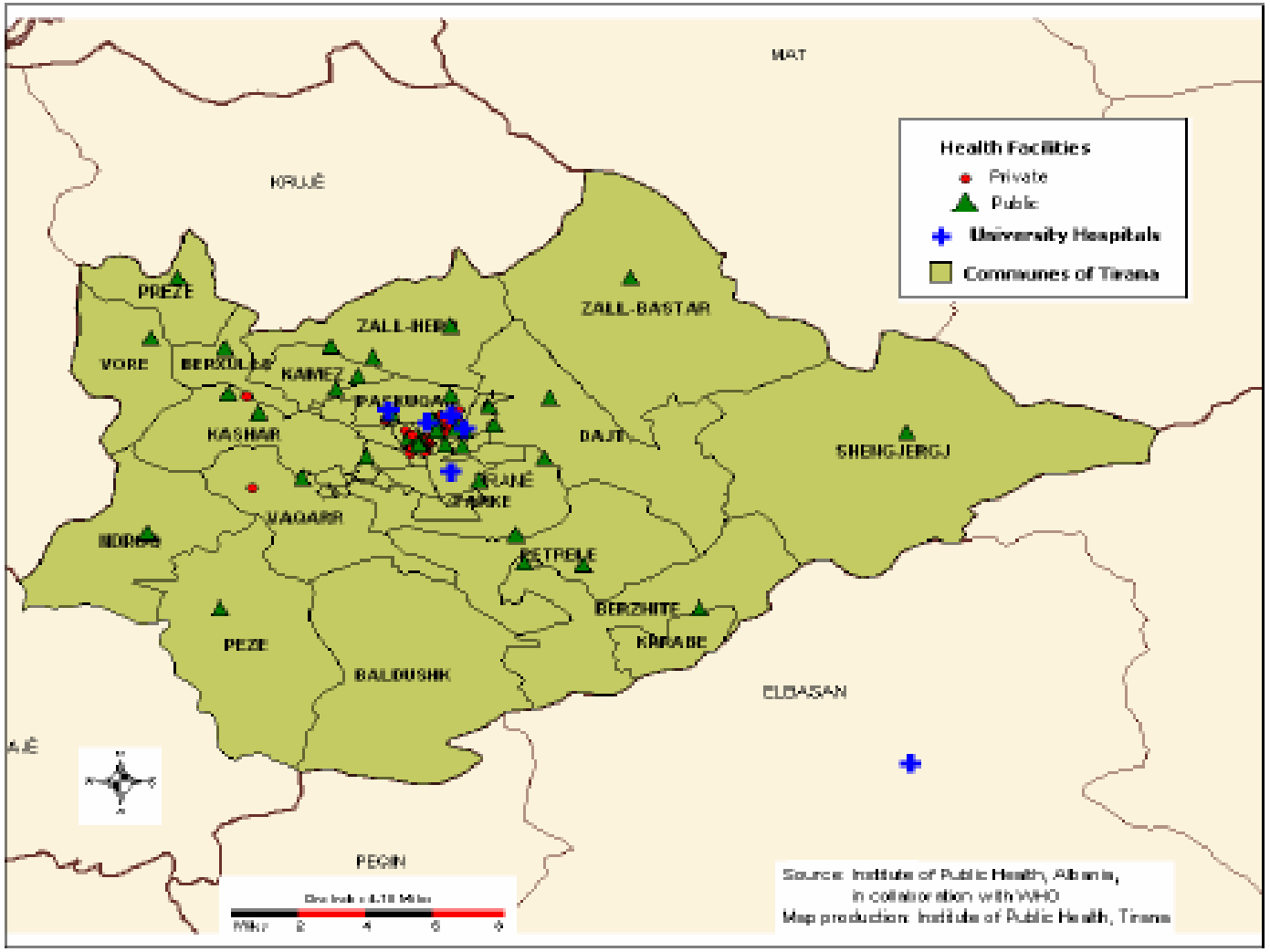
	Line	Bar	Pie
Diabetes cases per 100,000 population (2000-2012)	x		
Total health budget by program		x	x
Age composition of diagnosed cardiovascular disease		x	x
PHC referral rate, by region		x	
Age distribution of underweight children under age 5 years	x	x	x

Maps

Number of health workers per 100,000 inhabitants, by district



Location of health facilities, Tirana district, 2005



Summary

- Analyze indicator data to produce useful information for programs, policies, decision-making
- Keep it simple – clean, easy-to-read graphics are best for all audiences
- Choose analysis/display options that best fit the type of data you have

Questions?

Small group exercises: Analyzing and interpreting indicator data

1) Graphs

Step 1. Group work (15 minutes)
Divide participants in groups of 4 – 6. Give each group a set of graphs (see Exercise: Graphs) and the following instructions:

Divide the graphs you have between those you think are "good" and "bad". Stick the bad examples on one flip chart and the good examples on another. From these examples, build a <u>good practice</u> checklist for use of graphs.

Keep in mind:

- *Does the graph communicate well? Why or why not?*
- *Does the graph give all the information necessary? What information is necessary?*
- *Is the type of graph appropriate to the kind of data shown?*
- *Does the graph avoid distortions? How are distortions avoided?*

Exercise adapted from Unicef M&E training modules

1) Graphs

Step 2. Plenary discussion (15 minutes)
Reconvene in the plenary. Project each graph from the exercise using a PowerPoint slide. Ask each group for their analysis of each slide, making sure there is general agreement. Discuss contentious ones.

Get a volunteer from the group with the most complete list to listen to the discussions and build the master good practice list, adding as necessary to their group's list.

Have the participant present the master list quickly as a summary. Open to plenary any other considerations that should be added to the list.

2) Additional exercises to be added