“Nearly 10 million children under the age of five die each year – more than 1000 every hour – but most could survive threats and thrive with access to simple, affordable interventions.”

-World Health Organization
It’s not hard to understand why these deaths occur—we know **exactly** what causes them.

- Pneumonia
- Diarrhea
- Malaria
- Measles
- Malnutrition
- Neonatal Complications

Account for nearly 60% of all deaths. And can be prevented by simple, low-cost interventions like:

- Antibiotics
- Inhalers
- Vaccines
- Drink mixes
- Other cheap medications
If it’s so easy to treat these conditions, what’s the problem?

Doctors and nurses generally don’t work in the world’s poorest places—they can make more money elsewhere.

So, who do you train to provide these interventions? And how do you ensure that care quality is maintained?
The WHO (World Health Organization) and UNICEF came up with a solution in the 1990s.

**INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS**

### Does the child have fever?

**By history or feels hot or temperature 37.5°C** or above:

**IF YES:**
- High Malaria Risk: high or low

**THEN ASK:**
- For how long?
- If more than 7 days, has fever been present every day?
- Has the child had measles within the last 3 months?

**LOOK AND FEEL:**
- Look or feel for stiff neck.
- Look for funny nose.
- Look for signs of MEASLES: generalized rash and one of these: cough, runny nose, or red eyes.

**IF the child has measles now or within the last 3 months:**
- Look for mouth ulcers.
- Are they deep and extensive?
- Look for pus draining from the eyes.
- Look for clouding of the cornea.

**Classify FEVER**

#### HIGH MALARIA RISK

**Any general danger sign or:**

**HIGH RISK:**
- VERY SEVERE FEBRILE DISEASE
  - Give quinine for severe malaria (first dose)
  - Give first dose of an appropriate antibiotic
  - Treat the child to prevent low blood sugar
  - Give one dose of paracetamol in clinic for high fever (38.5°C or above)
  - Refer URGENTLY to hospital

**Fever (by history or feels hot or temperature 37.5°C** or above)
- MALARIA
  - Give oral antihistamine or other recommended antimalarial
  - Give one dose of paracetamol in clinic for high fever (38.5°C or above)
  - Advise mother when to return immediately
  - Follow-up in 2 days if fever persists
  - If fever is present daily for more than 7 days, refer for assessment

**LOW MALARIA RISK**

**Any general danger sign or:**

**LOW RISK:**
- VERY SEVERE FEBRILE DISEASE
  - Give quinine for severe malaria (first dose) unless no malaria risk
  - Give first dose of an appropriate antibiotic
  - Treat the child to prevent low blood sugar
  - Give one dose of paracetamol in clinic for high fever (38.5°C or above)
  - Advise mother when to return immediately
  - Follow-up in 2 days if fever persists
  - If fever is present every day for more than 7 days, refer for assessment

**FEVER - MALARIA, UNLIKELY**
- Give one dose of paracetamol in clinic for high fever (38.5°C or above)
  - Advise mother when to return immediately
  - Follow-up in 2 days if fever persists
  - If fever is present every day for more than 7 days, refer for assessment

**SEVERE COMPLICATED MEASLES**
- Give Vitamin A treatment
- Give first dose of an appropriate antibiotic
- If clouding of the cornea or pus draining from the eye, apply tetracycline eye ointment
- Refer URGENTLY to hospital

**MEASLES WITH EYE OR MOUTH COMPLICATIONS**
- Give Vitamin A treatment
- If pus draining from the eye, treat eye infection with tetracycline eye ointment
- If mouth ulcer, treat with pantothen Violat
- Follow-up in 2 days

**MEASLES**
- Give Vitamin A treatment

**Other important complications of measles - pneumonia, diarrhea, ear infection, and malnutrition** are classified in other tables.
The WHO (World Health Organization) and UNICEF came up with a solution in the 1990s.

- The health workers who use IMCI are expected to be literate and have the physical ability to examine the patient. That’s it! They’re usually just young women who have completed some high school.

- Health workers are given a week and half of full-time training in a classroom and are expected to be ready to follow the guidelines on their own afterwards.
The basic function of IMCI

A systematic approach to appropriately Identify:

- Symptoms
- Diagnosis
- Treatment
1) The protocols are printed on paper and referred to at the community clinic
   - Flipping through pages is inefficient, prone to error and makes the health worker look incompetent—hence losing patient trust.

2) After a short training period, the health workers are left on their own. Over time their adherence to the protocols deteriorates—workers get sick of flipping through sheets and often become complacent that they’ve memorized the algorithms.
   - Evaluation studies in various countries have shown that the quality of care remaining after months have passed, is often no longer classifiable as IMCI.
2) The protocols are designed for a specific set of child illnesses that are common throughout the world.
   - But subtle differences in symptoms, diagnosis and treatment exist across countries—and the paper algorithm cannot to be quickly customized and disseminated to better accommodate local needs.

3) It is difficult for health workers to make sure all necessary information is collected and that certain branches of the flowchart haven’t been missed.
   - This leads to misdiagnosis, incorrect treatment and poor health. The paper IMCI tool has too much text and is hard to follow in high stress medical situations.
Our goal

Computers and electricity are now available in most developing countries.

How about an efficient, user-friendly software solution for IMCI?

You take it from here