UNIVERSITÀ DEGLI STUDI DI MILANO

Control of scabies outbreaks in an Italian hospital: an information-centered management strategy

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Regione Lombardia

ASL Como

Summary

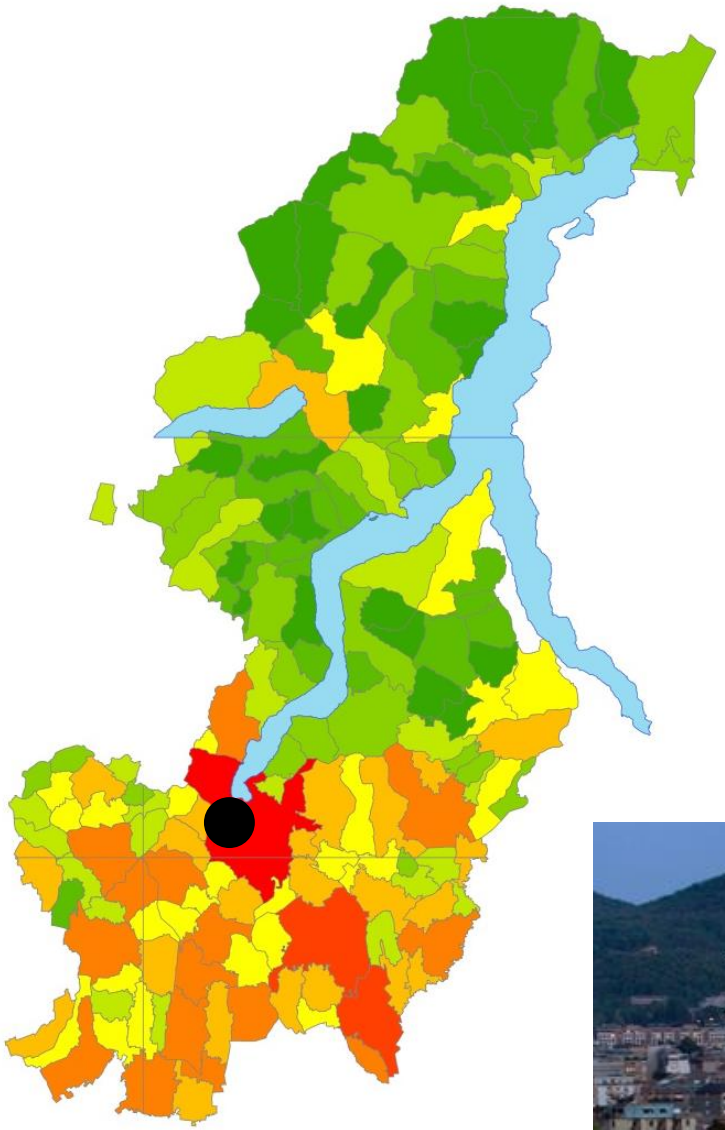
- A brief introduction on scabies
- Description of an hospital outbreak
- Design of a strategy based on information
- Results
- Conclusions

1. Background

- Scabies is a dermatologic infestation caused by the *Sarcoptes scabiei* mite
- The worldwide prevalence has been estimated at approximately 300 million cases a year
- In industrialized countries: small epidemics
  - families, schools, prisons, long-term healthcare facilities, hospitals

Critical issues in hospital outbreaks

- Healthcare workers (HCWs) are often the first to be diagnosed with the infection
- Atypical clinical presentation: unusual distribution of lesions due to handwashing; no lesions on the wrists or fingers
- Being at risk of infection can have a negative effect on the quality of assistance
- Scabies is perceived by the “general” population as associated with low hygiene levels: problem for an effective communication



- Incidence in Lombardy:
  - In 2011: 11 cases /100,000
  - In 2012: 9/100,000
- In the province of Como:
  - In 2011: 7/100,000
  - In 2012: 9/100,000

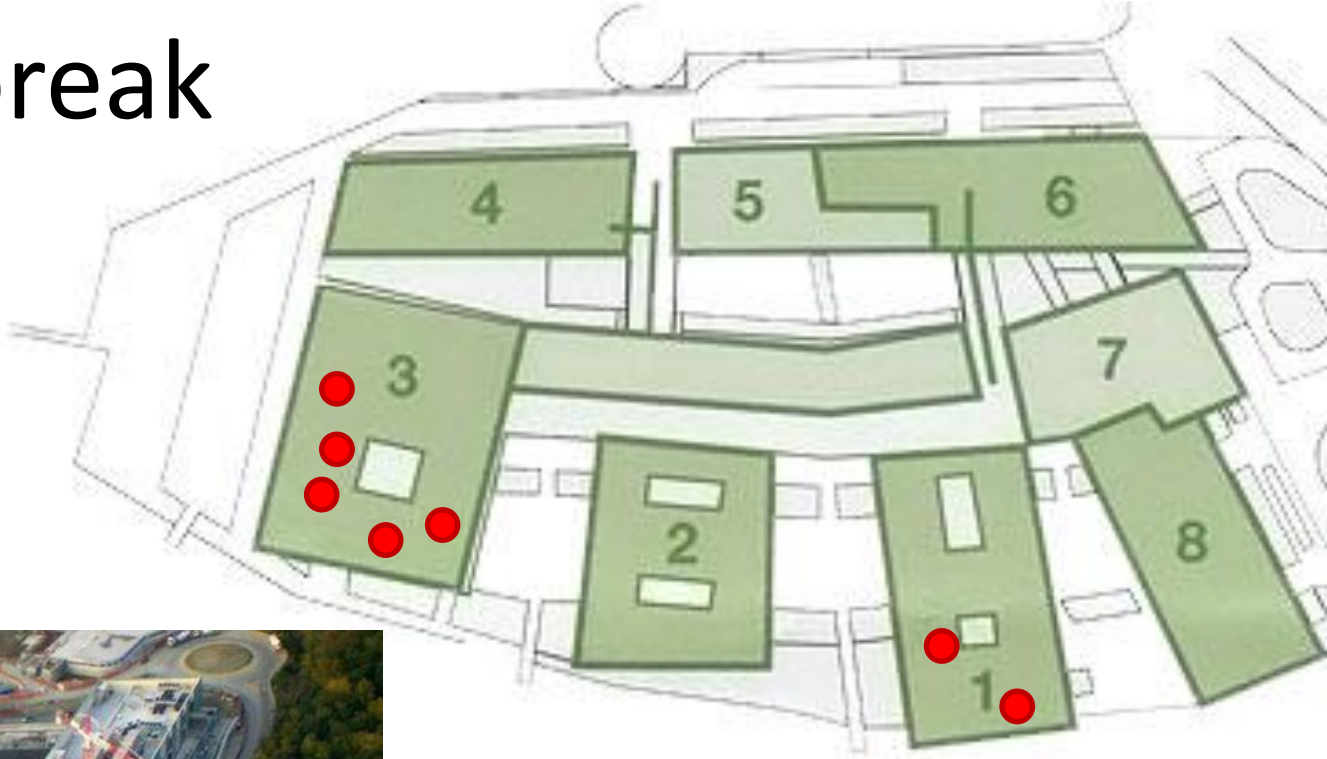
The setting

- Hospital with 600 beds
- 14 departments and 31 divisions
- Built less than 5 years ago
- Approximately 26,000 admissions a year

Health parties involved

- In Italy, all cases of scabies must be reported directly by the clinician to the local health authority (**ASL**)
- Direct update of the centralized **regional** infectious diseases database
- Joint epidemiologic task force:
  - **Hospital management**
  - ASL

2. The outbreak

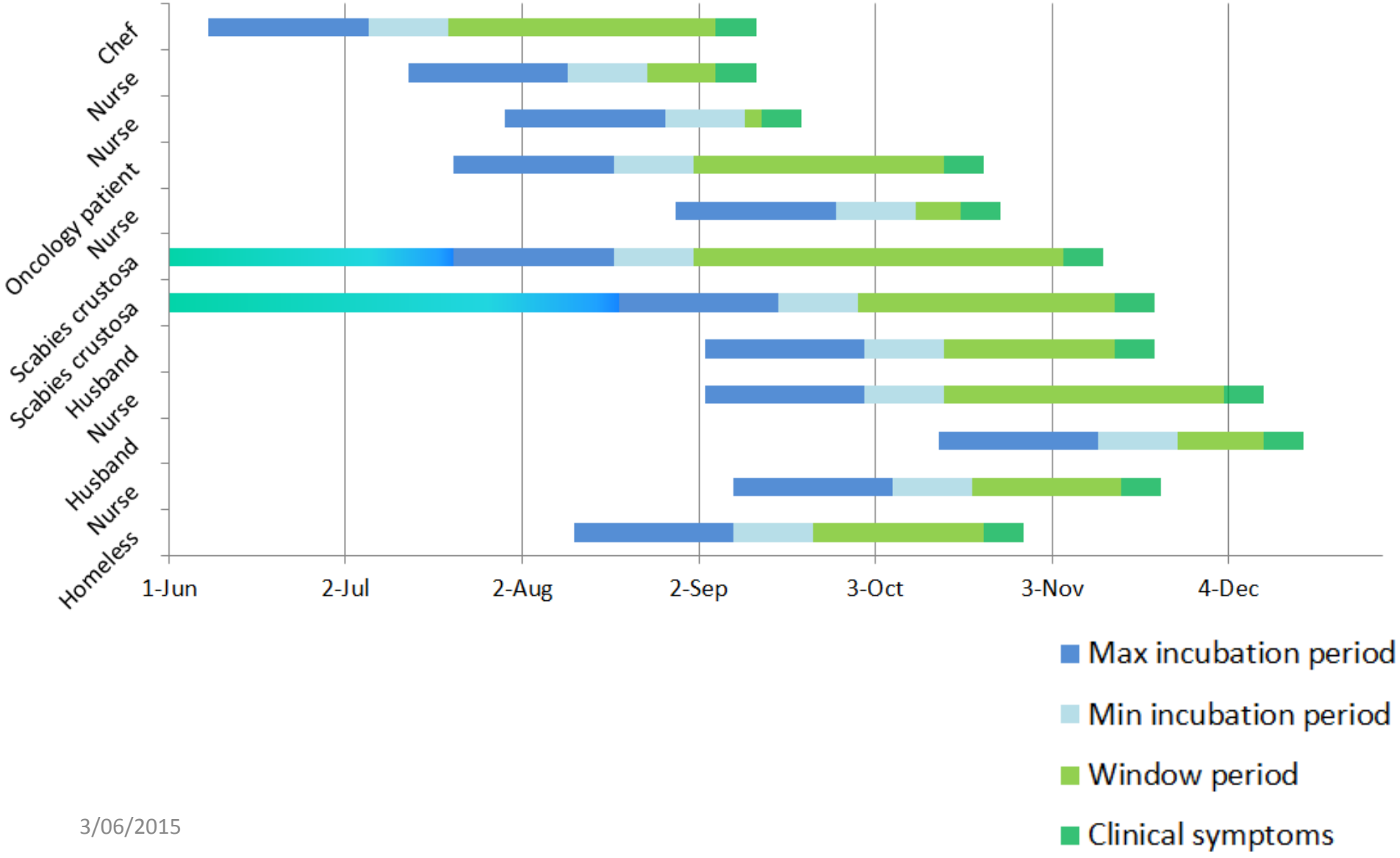


- Twelve cases in 3 months
- Four wards involved
- Forty-three contacts received prophylaxis

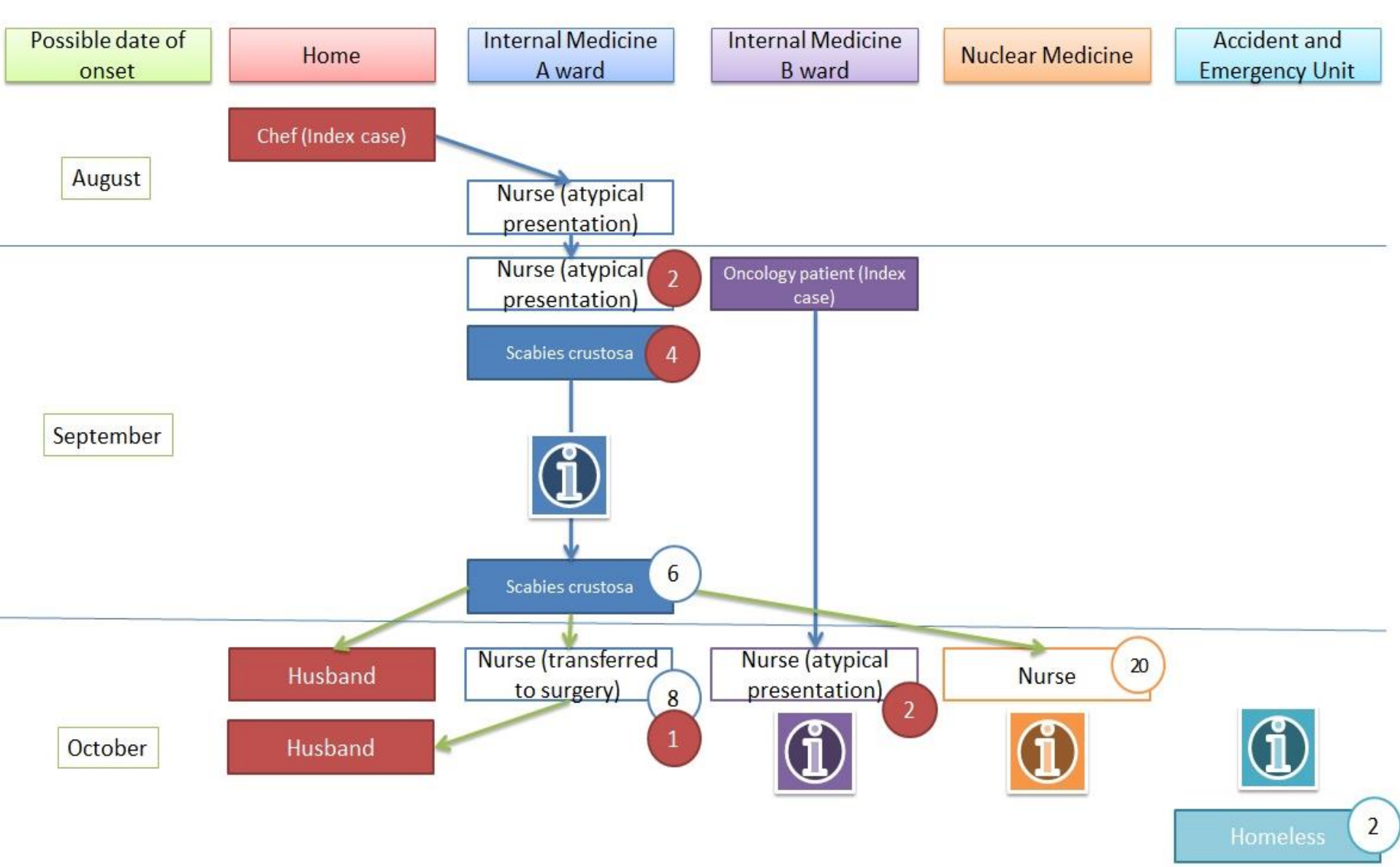
Case & Contact definitions

- Classic scabies
- Atypical scabies
- Crusted (Norwegian) scabies: contagious through the environment
- Close contact: “hands-on” contact (at least 10-15 minutes)
  - HCWs are considered close contacts when having assisted a patient with scabies
- Indirect contact: all patients and HCWs in the same ward of a case
  - Ideal target for an information campaign (risk of exposition, risk of remaining undetected)

Infection timeline



Reconstruction of the chain of infection



3. Information campaign

- Aimed at the HCWs and all people who had been in contact with the hospital:
  - voluntary workers
  - students
  - patients and their families
  - family doctors
- Both verbal and written information were provided
- An information leaflet was distributed to all patients on the wards involved
- Family doctors of patients who had already been sent home were informed

- Regular monthly (and on-demand) meetings for HCWs
  - list of all HCWs and patients who could have had contacts with the cases
  - given detailed information about:
    - preventive measures to be adopted in wards
    - routes of infection
    - symptoms of atypical presentation
    - home sterilization and sanitization
- HCWs on leave were provided with all updated information on their return to work
- Reports were sent by e-mail if away from work for more than a week
- All members of the hospital staff were contacted

Information and training strategies

	Meetings	Wards informed	A & E informed	Family doctor informed	Seen by dermatologist
September	1	1	No	320	9
October	2	3	Yes	120	2
November	2	9 (wards on the same floor)	Yes	100	2
December	1	Whole hospital	Yes	-	5 (+ 3 students)
Total	6	All	-	540	21

- The ward matrons oversaw the implementation of preventive measures and the immediate reporting of new cases
- Nursing staff of the A&E Unit was alerted to take precautionary measures
- Operational guidelines were prepared and distributed
  - keep suspected cases in isolation rooms
  - transfer in the Infectious Diseases Unit
  - hygiene procedures for management of suspected cases of scabies
- Involvement of the cleaning and patient transport services (outsourced)

Prophylaxis management over time

Month of diagnosis	Cases				Close contacts (prophylaxis)		Indirect contacts (no prophylaxis)	
	Health workers	Patients	Family members	Suspect	Health workers	Family members	Health workers	Patients
September	2	-	1	3	-	2	45	420
October	1	2	-	-	2	2	101	250
November	1	2	1	2	26	4	5	230
December	1	-	1	1	8	1	57	20
Total	5	4	3	6	36	9	208	920

Take home messages

- Epidemics of scabies have high costs:
  - Economically
  - In terms of the prestige of the hospitals
- An information-centered strategy can replace mass prophylaxis to deal with scabies epidemics:
  - Less costs (prophylactic drugs)
  - Less adverse effects
- However:
  - Support from all the units involved is needed
  - A leading team is required (hospital management plus public health authorities)

- Hospitals should keep a high index of suspicion for cases of scabies crustosa especially:
  - in patients with an impaired immune system with severe eczematous lesions, immunosuppressive therapy
  - in A&E units
- All cases must be notified as soon as possible
- HCWs need specific training and a periodic refresh on low prevalence diseases