Data collection and analysis during mass displacements

The MSF experience in the Balkans during the 2015 refugee "crisis"

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Refugee crisis 2015: Context

- Unprecedented influx of people (~1,000,000) in short time
- Multiple countries of origin - languages - cultures
- People on the move
- Political/policy "crisis"
- Context volatile – unpredictable – fast changing
  - Political (closure of borders, registration, facilitation or hindrance of agencies/NGOs/volunteer groups)
  - Legal (legislation, asylum procedures)
  - Humanitarian needs
- Multiple actors with variable experience
- Securitization of crisis (border control/police, fences) – violence by authorities
- High media coverage and international attention

MSF Response - Operations

- **Primary health care (PHC) – Referral -** Health promotion
  - **Chronic diseases**
- **Mental health (MH) care** (individual & group)
- Vulnerable groups: identification & referral
- Victims of torture
- Food & Non-Food Item (NFI)
- Transportation, Shelter, Water & Sanitation
- Search & Rescue
- Advocacy - Communication

Clinic settings

Purpose of data collection

- Programmatic decisions
  - Project locations
  - Medical/Public Health needs (drugs, supplies, activities, etc.)
  - HR (clinicians, psychologists, cultural mediators, training, etc.)
  - Logistics
  - Quality of projects, pertinence
- Surveillance of epidemic-prone & other diseases
- Monitoring of intentional trauma and violence
- Advocacy and communication (local, national, international level)

Data collection

- Multiple databases (PHC, referral, MH individual first assessments & follow ups, Group sessions, Trauma)
- Multiple locations
- Line-list
- Anonymous patient data
- Paper register -> excel (daily)–> STATA (weekly)–> excel

Data flow
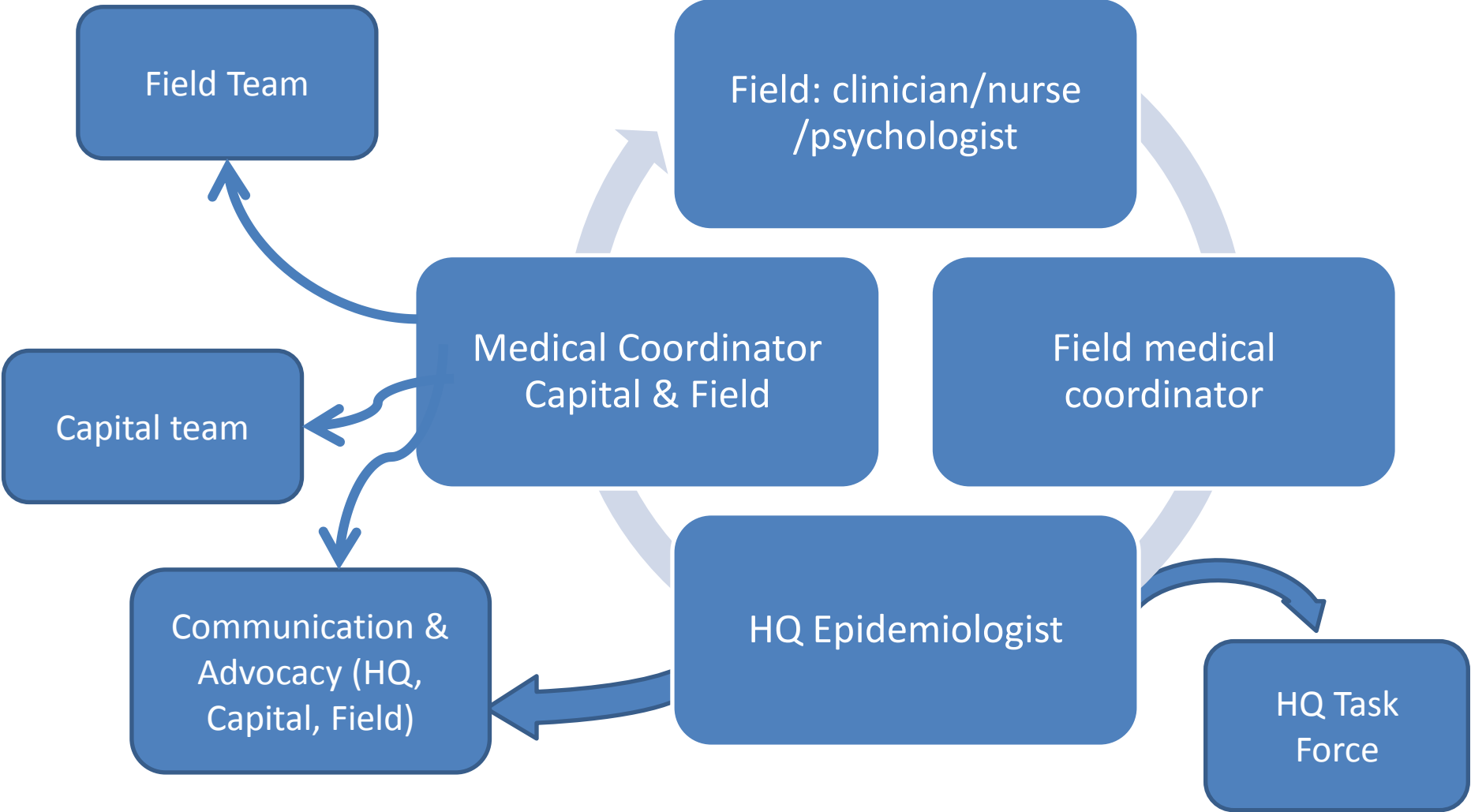
Variables: Primary health care/Mental health

Project

- location
- shift

Person

- socio-demographics
- vulnerabilities
- chronic diseases (PHC)
- vaccination status in Under 5 (yes/no)
- traumatic life-events (list)
- torture (MH)
- intentional physical trauma/violence (MH)

## Migration trip

- duration
- entry point
- arrival date

Consultation

- category of symptoms
- vaccine preventable
- scabies
- malaria test
- TB suspect
- dressings
- health passport issued (PHC)
- theme in FU sessions (MH)
- need for follow up (MH)
- medication (MH)
- referrals (from/to) (PHC/MH)
- death
- comments

Data analysis

- Descriptive analysis for/by:
  - socio-demographics
  - morbidities (most common, epidemic-prone, vaccine-preventable)
  - chronic diseases, trauma/violence
  - project, country
  - weekly, monthly, quarterly, yearly
- Tables & graphs
- Multivariate for risk factors
- Some variables very badly filled, not used in analysis (e.g. vaccination status)
- **But not:** time-series analysis

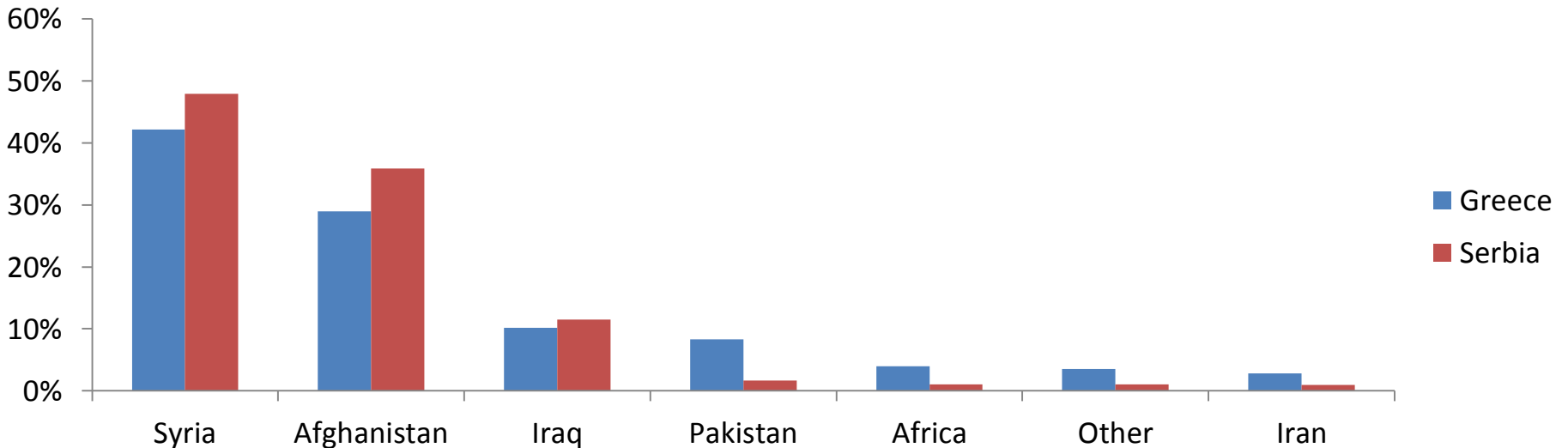Number of consultations by country and epidemiological week, Greece & Serbia, 2015
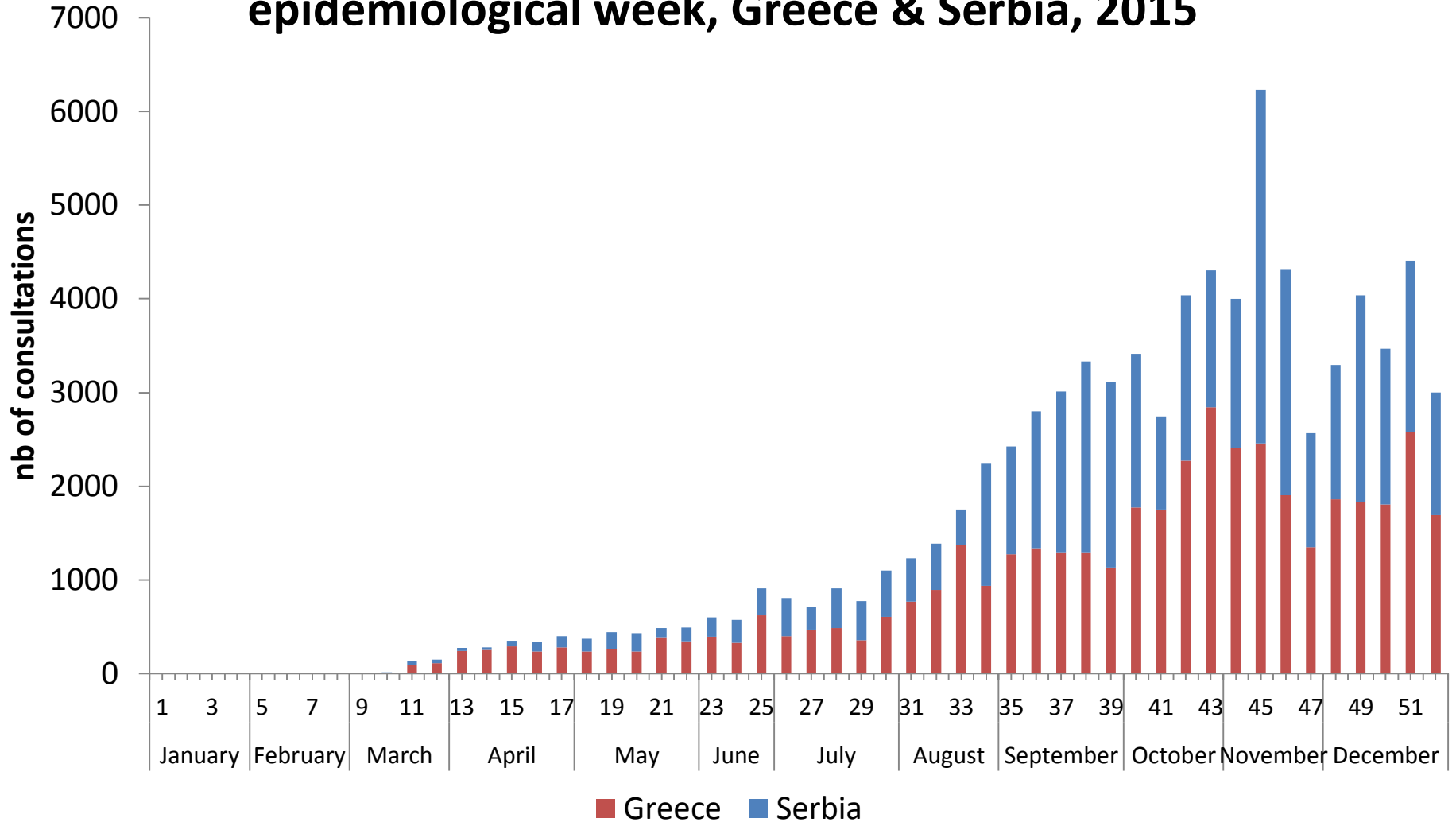
Proportion of MSF-OCB consultations out of total arrivals, Greece, 2015

Legend:
- Total arrivals in Greece
- Total MSF-OCB consultations Greece
- % consultations out of total arrivals
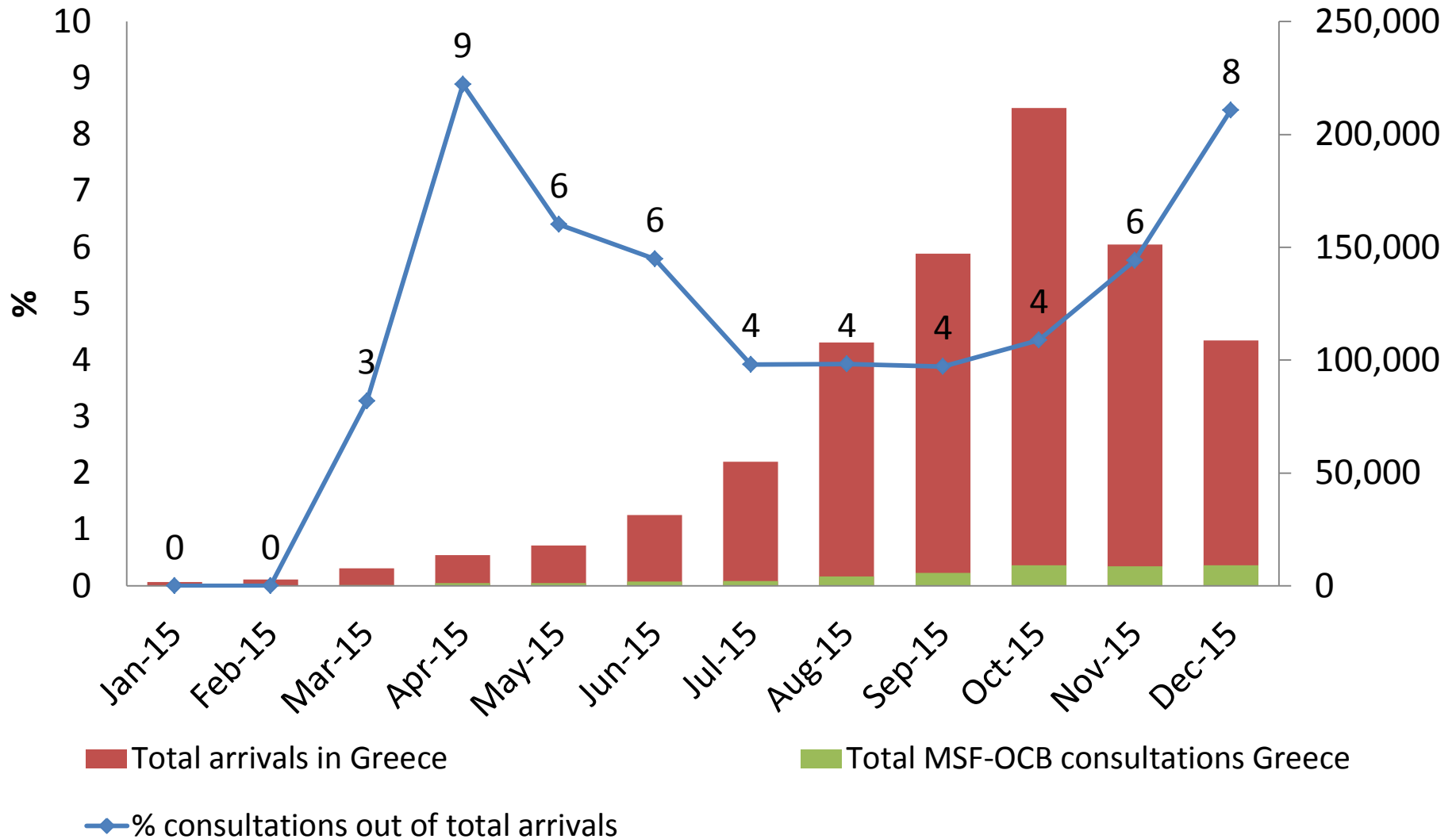
Proportionate morbidity of main pathologies by month, Greece & Serbia, 2015

Legend:
- Respiratory tract
- Trauma
- Skin
- GI tract
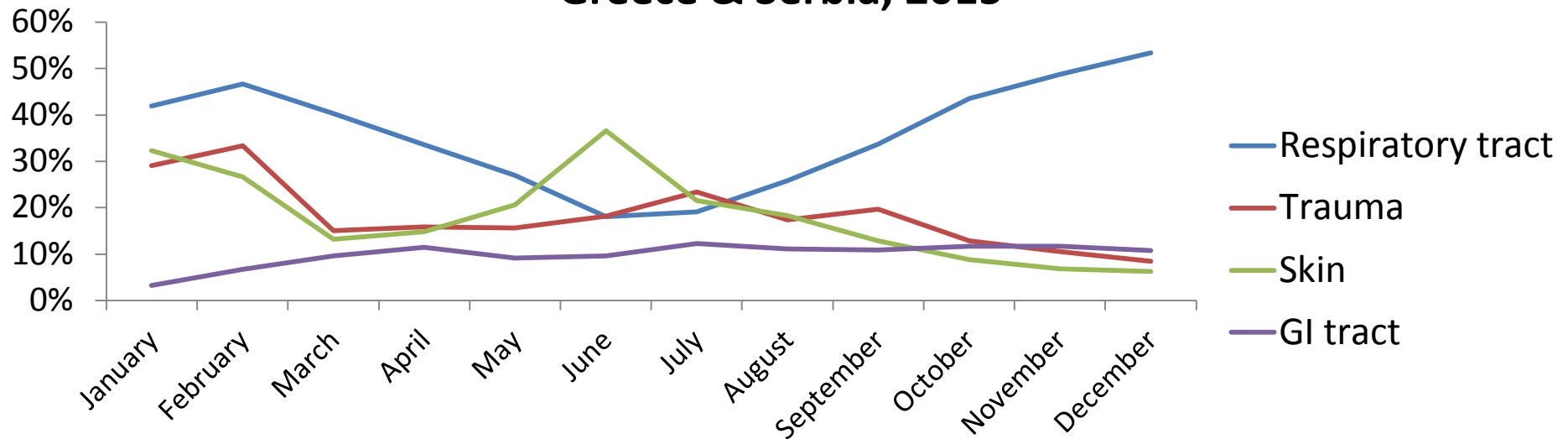
Proportion of consultations by nationality and country, Greece & Serbia, 2015

Legend:
- Greece
- Serbia

Categories: Syria, Afghanistan, Iraq, Pakistan, Africa, Other, Iran

Challenges: Context-related

- Overwhelming numbers of people/high workload
- Difficult working conditions/stress
- Cultural mediation:
  - Many languages, not enough CMs, not appropriately trained in medical/mental terminology
  - Slower consultations
- Patients on the move
  - Quality care, refusal of referrals, follow-up/ continuity of care
  - Visits in >1 clinics along the way- double entries
- Multiple medical actors/volunteers – no appropriate exchange of data/info, different case definitions, various levels of data collection
- Difficult to obtain appropriate denominators (# numbers by # actors)

Challenges: Program-related

- Many data collectors/data entry people
- Data entry by clinicians/nurses after working hours, at night shift
- Various backgrounds in data collection & entry, in use of software (excel, etc.)
- High turn-over of staff
- No Epidemiologists in the field
- Multiple projects in >1 countries, need for harmonised data collection and analysis

Challenges: database related

Field:

- Paper register
- Entry to excel line list

many variables, time-consuming

- No clear case definitions, no instructions on use of database, misclassifications
- Excel database without locked cells
  - Missing values, entry errors (pregnant men, misspellings)
  - Use of comments box for diagnosis
  - Double entries (multiple clinics), follow ups included

Headquarters:

- Multiple excels for cleaning & analysis in weekly basis
- Took time to automate data cleaning (do files)
- Lots of manual cleaning, use of comments box

Conclusions

- Very dirty database (excel line list)
- Difficult to use for analysis in real-time by field staff
- Lack of motivation of field staff because of difficulty

BUT

- Line-list very helpful for more in-depth analysis than aggregated data collection
  - Advocacy/communication team very happy

Solutions pursued

- Development of case definitions, excel instructions
- Clean up of excel database and locking of cells
- Survey among clinicians/psychologists on type of database/software they want to use
  - Excel (locked cells)
  - Epidata
  - **Tablet-based database**
    - **Initial idea to use open source (WEPI)**
- Delays in tablet implementation – crisis finished using excel

What is needed

- Line list of patients with information needed including violence related events
- Easy-to-use software (for dummies) for field workers
  - Fast and easy data collection, fewer mistakes
  - Real-time data cleaning
  - Fast and easy analysis with tables/graphs for multiple user profiles
- Case definitions, database instructions
- Denominators
- Harmonised data collection and sharing among projects, countries, actors

- **Acknowledgements**
- Patients
- Field, coordination & Headquarter teams

@MSF/Florian Asis Schulz

Thank you!

Questions?

Refugee & Migrant flows in Europe (2014-17)

Arrivals	2014: 219,000 2015: 1,008,616 2016: 362,753 2017 (Jan-Aug): 123,950

Closure of Western Balkan route, EU-Turkey deal