

Preliminary Experience with Text-message Reminder Service for Ambulatory Patients

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Background

Non-attendance (NA) and cancellations cause

- Lost capacity/increased cost
- Decreased state of health
- Disrupted workschedules

Aim

- 1) Evaluate effect of TMRS
- 2) Describe subgroup with high incidence of NA or cancellations
- 3) Perspective / compare with the literature

Reasons for NA / cancellation

- Forgetting
- Competing employ/family commitments
- Difficulties with transportation
- Poor health
- Emotional barriers
- Poor patient-provider relationship

NA and associated factors

- + Age
- + Visit type
- + Wait time
- + Insurance type
- + Clinical presentation
- Message timing

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- + Age
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- Message timing
- ? Weekday variation
- ? Seasonal variation

Background population

- Ambulatory patients 2011 – 2012 (2013)
- Outpatient Clinic
- Dep. of Plastic Surgery and Burns
- Copenhagen, Denmark



Method

- Retrospective study
- Data retrieved monthly from IT-dep.
- Inclusion
 - Active registration required
 - Posters at entrance and in clinic
 - Pamphlets sent out
 - Studenthelpers provided

Unforeseen problems...

- TMRS combined with email-reminders until dec 2012
- Inclusionrate 21% of population
 - Included Dec 2012 + Jan 2013
 - 25 months instead of 23.



Population demographics

- Mean age 49,7
- Range 0 - 100
- 2:3 male-female ratio
- Plastic surgery
 - 40% oncologic
 - 26% burns
 - 16% micro
 - 13% general
 - 4% pediatric

25months period

- 33991 available timeslots (=100%)
- 83% consultations (n=28345)
- 6% non-attendance (n=2105)
- 5% cancellations (n=1680)
- 6% other (n=1891)

Time periods

1) Control

11months = jan 2011 – nov 2011

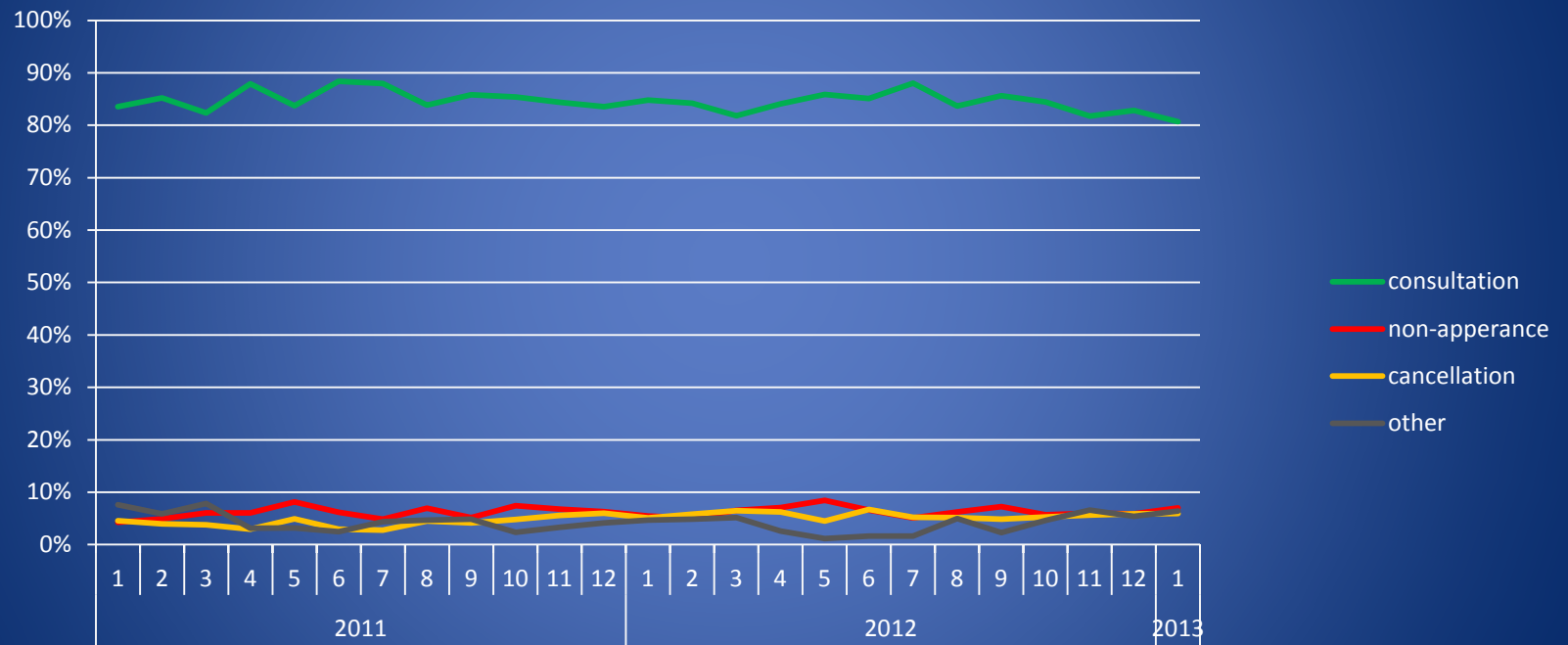
2) TMRS and email

12 months = dec 2011 – nov 2012

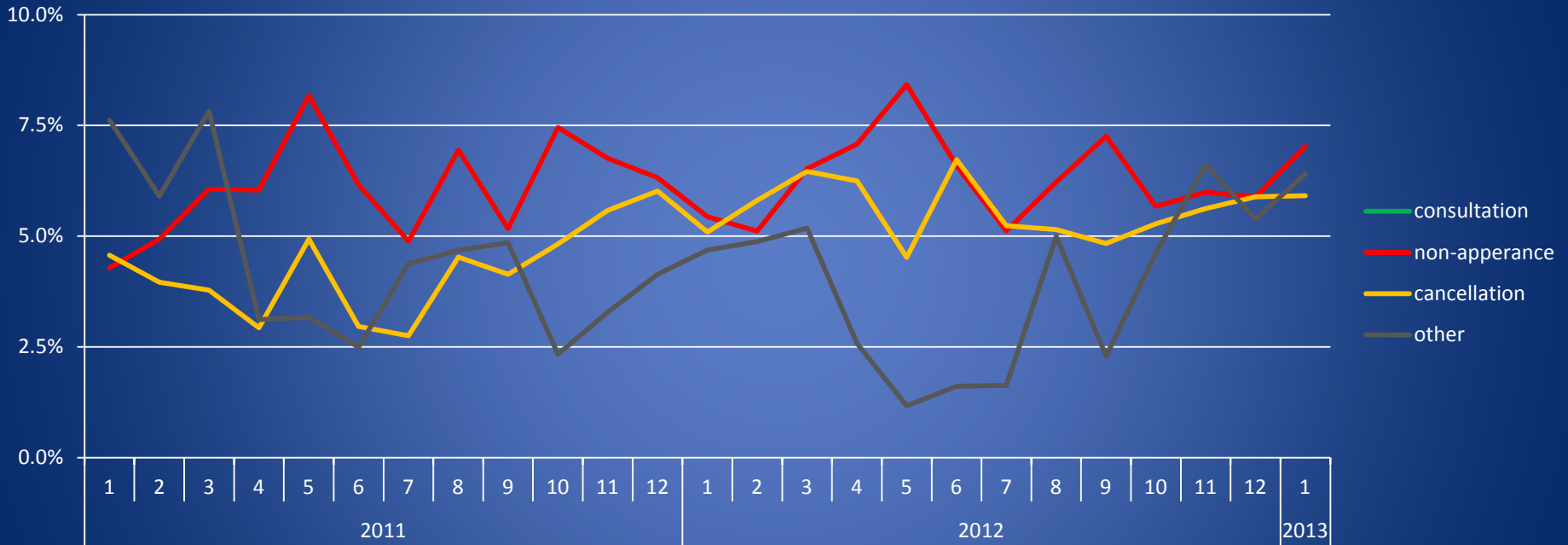
3) TMRS only

2 months = dec 2012 – jan 2013

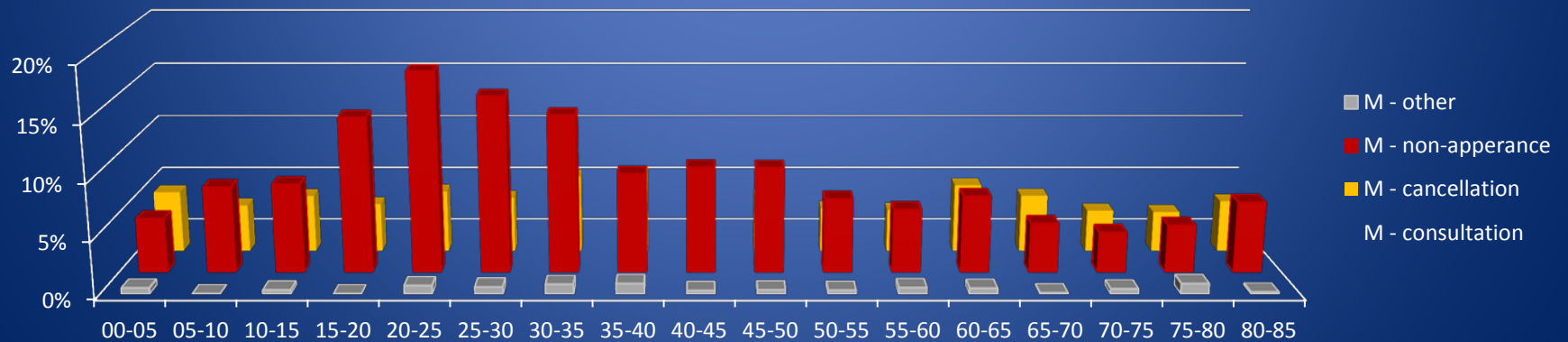
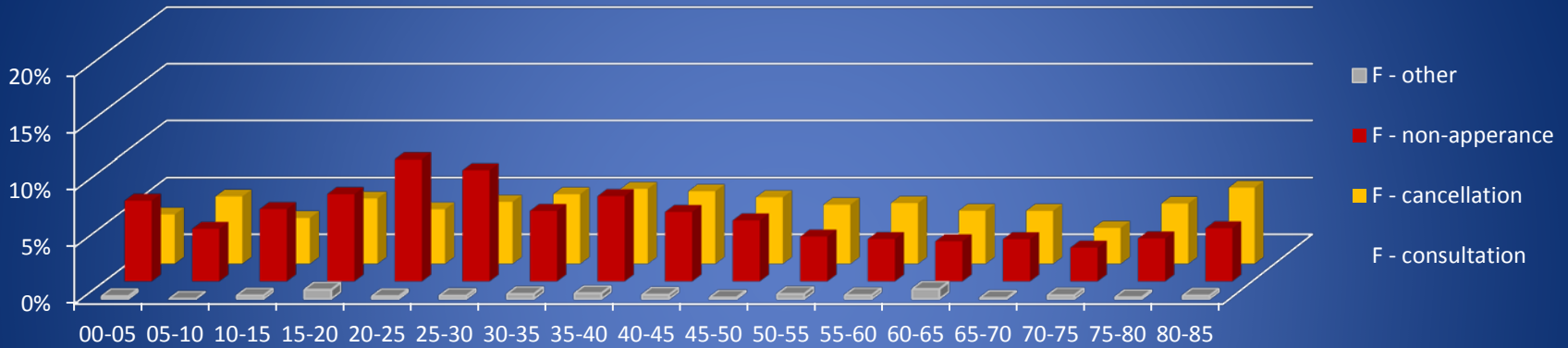
Effect of TMRS



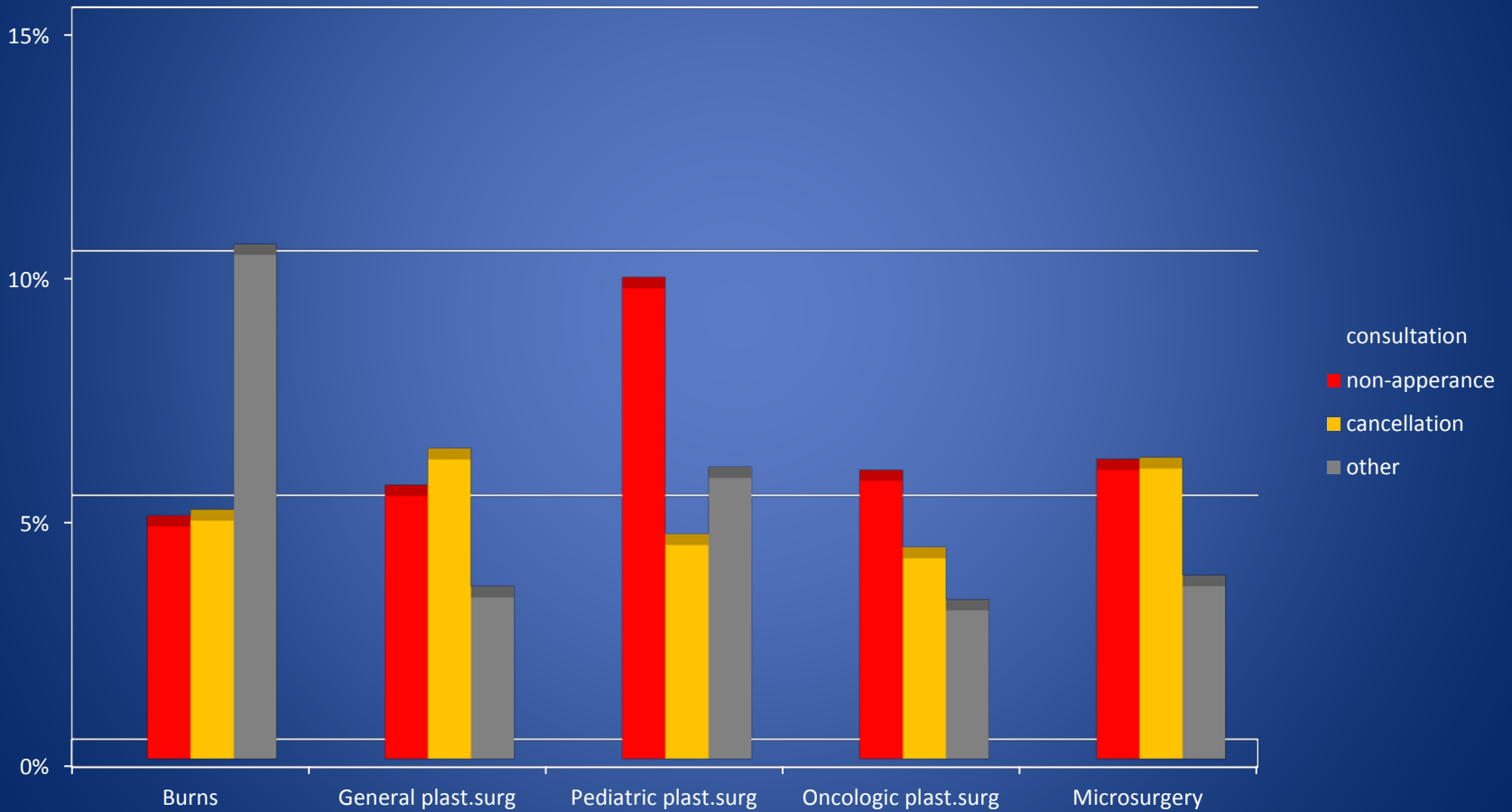
Effect of TMRS



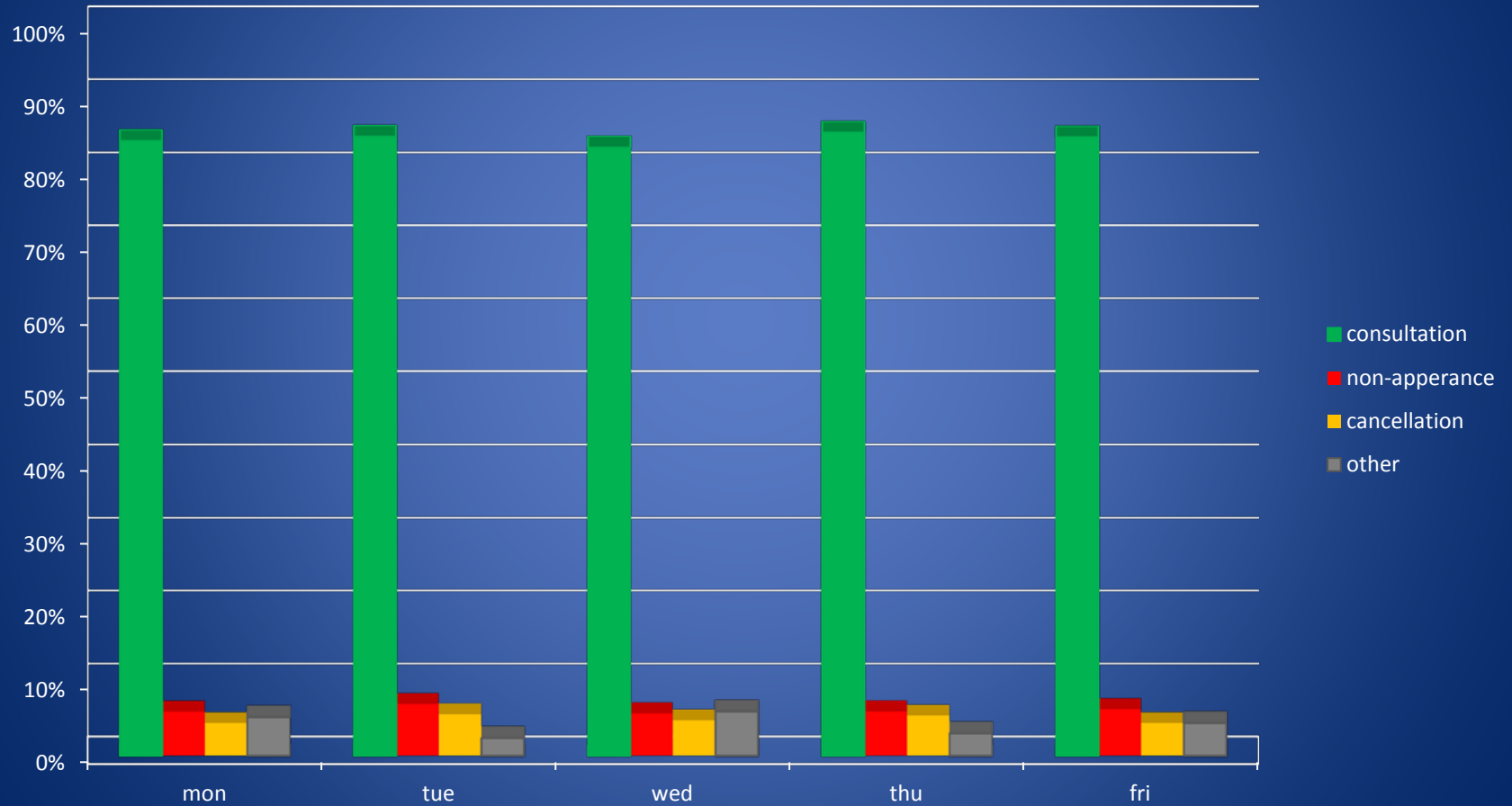
Age and gender



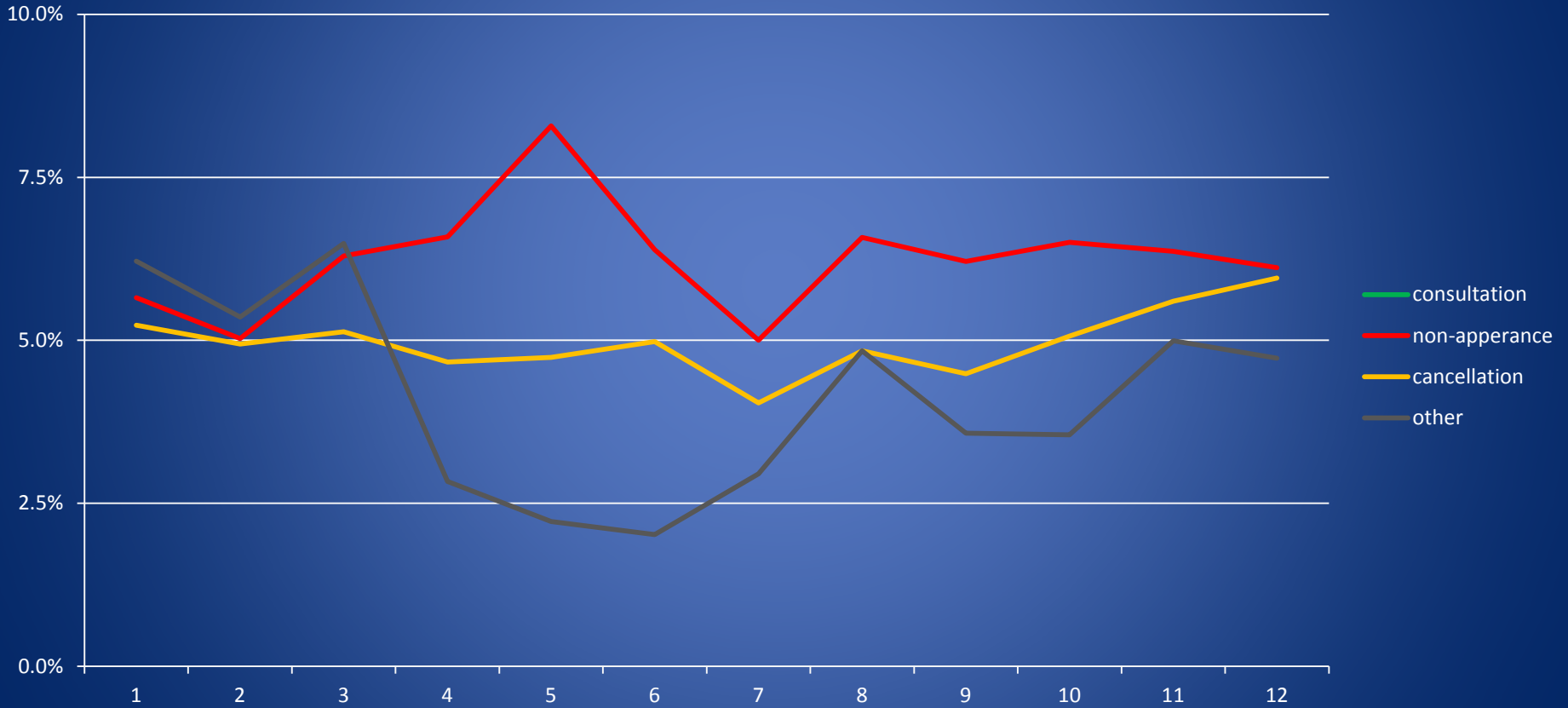
Clinical presentation



Weekday variation



Seasonal variation



Discussion

- Expectations
 - Decrease NA by 50% ?
 - Inclusionrate
- Lag-effect
- Shift
 - compensatory increase in cancellation?
- Maturity of intervention

Take-home messages

- Expect more NA from young males
- Measure shift from NA to cancellations
- Limit expectations until setup is mature





Recommended readings

- *Guy et al. How effective are short message service reminders at increasing attendance? A meta-analysis and systematic review. Health Serv Res, 2011.*
- *Hasvold & Wootton. Use of telephone and sms reminders to improve attendance: a systematic review. J Telemed Telecare, 2011.*
- *Hennessy et al. Outpatient management and non-attendance in the current economic climate. How to best manage our resources? Ir Med J, 2010.*
- *Parikh et al. The effectiveness of outpatient appointment reminder systems in reducing no-show rates. Am J Med, 2010.*
- *Stone et al. Reducing non-attendance at outpatient clinics. J R Soc Med, 1999.*

Reminder systems

- Personalised
- Automated
- Target group
 - Nonattenders!
 - Age group?
 - Other demographic characteristics?

NA - population

- Definition
- Age, range mean
- 52% in agegroup 15-50
- Sex
- Subspecialty

- Relative , absolute

Expectations

- Expect reduction of NA by 50% ?
- Inclusion 20% of population
- Reduction of NA by 50%

≈ Reduction of 10%

≈ reduction from 6% to 5,5%

≈ reduction from 18% to 16%

Perspective

- Queen Victoria Hospital, UK*
- Largely outpatientbased (plastics, burns, max-facs, corneoplastic
- Period 3 years
- Presumed consent
- 300 reminders daily
- Significant reduction of NA
- Shift-effect unknown

*) Personal communication, Telemedicine office,
Queen Victoria Hospital, East Grinstead, UK

Publication bias ?

- Only one study has not shown effect of reminders