Slide 1

Good morning!

I am Marie Thérèse Lussier, and I am a Family physician and researcher from the Department of Family Medicine and Emergency Medicine of Université de Montréal, Canada. My colleague, Claude Richard is an associate researcher at the Laval Regional Health Center which is affiliated to Université de Montréal

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The title of this 6th presentation is “Decoding patient-physician communication about medications
Findings that help understand medication taking practices”

**Slide 2**

The objectives of this talk are…

**First** to describe MEDICODE

**Second**, to illustrate the type of data produced by MEDICODE

**Third**, to discuss the significance of MEDICODE data in relation to patient engagement and medication taking practices

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In the next few slides we will describe how MEDICODE works.

**Slide 3**

MEDICODE describes talk about medications during healthcare encounters both in terms of **content** and **interaction THUS** providing a **complete** picture of the “**what”** is said and the “**how it is said” about medications**

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You can refer to these 3 publications for details on the method and its validation.

**Slide 4**

Here is a diagram summarizing MEDICODE coding steps.

Coding can apply to Health conditions as well as medications.

Since our talk today is about **medicatio**ns,

\*we shall concentrate on the dark blue rectangles in the diagram.

First, Coders are trained to identify **all** instances of medication discussions.

\*For each instance of discussions, coders ascribe **to it** one of **40** **predefined** themes.

CLIC

\* Here are some examples of predefined themes

 CLIC

\***Then**, for **each** **theme** the coder

**- specifies “who”, of the provider or patient, initiates the discussion**

 **- describes the type of** **interaction pattern as either a**

* + Monologue when only one person speaks
	+ Dyad when there is **one** back and forth between the 2 persons
	+ Dialogue when there is **more than o**ne back and forth between them

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\*At this point, the coder’s work is done.

When all the encounters have been coded in this fashion, computing, aggregating and analyzing the raw data begins.

To facilitate the presentation of this data in a **meaningful way**, our group developed

* **three “population level” interaction indicators**
* and
* **a spatial representation of their combination called the “Sky View”.**

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Let us turn to the next slide to explain what we mean by Dialogical role, Preponderance of initiative, Dialogue Ratio.

And to illustrate the Sky view .

**Slide 5**

\*In this two dimensional graph, the **x** axis represents the **Dialogue ratio** and the **y** axis, **Predominance of initiative.**

**\*Predominance of initiative** describeswho of the provider or patient introduces discussion of the theme**. Its v**alues vary from -1 to +1. Any value **above** “0” indicates a dominance of HCP-led discussions and any value **below** it indicates a dominance of Patient-led discussions

**\*Dialogue ratio** describes the relative proportion of monologues or dialogues in Rx discussions.

DR values vary from 0 to 1. Any value **below** 0.5 indicates a **dominance** **of monologue** whereas any value **above** 0.5 indicates a **dominance** **of dialogue**.

Combining these 2 indicators in a graph **defines** **4 quadrants** in which a pattern of interaction emerges.

At the bottom left discussions are Pt-led **monologues** in which HCP adopts a Listener role.

At the top left discussions are HCP-led **monologues** and the HCP adopts an information provider role.

At the top right discussions are HCP-led **dialogues** and the HCP adopts the Instigator of dialogue role and at the bottom right, discussions are Patient-led **dialogues** in which the HCP adopts a Participant role

**Slide 6**

Now let’s present a few studies to illustrate how MEDICODE indicators may be used.

The first paper reports on the results of a RCT evaluating a patient communication education intervention aimed at increasing patient participation.

The intervention was delivered in two formats: e L or eL followed by a W.

**Slide 7**

This figure reports on the average number of themes broached during the discussion of treatment for the three targeted chronic conditions.

1. As we see on the right of the figure, the number of themes discussed for the three classes of Rx was similar.

2. However when discussing **hypertension** medications, the number of themes was significantly higher in both the eL and eL +W groups compared to the UC group.

**Slide 8**

These Sky views illustrate different discussion patterns on 4 different themes: CI, Dosage, Attitudes/emotions and Adherence for the 3 study groups.

In the Dosage and Instructions Sky view.

**All** study groups discussions are found in the upper left quadrant, indicating a **Physician-led monologue.** This pattern might be expected since this type of technical information often falls within the exclusive competence of the physician.

For discussions of CI, the pattern remains **Physician-led monologue** for the UC group. **However for both the intervention** groups, discussions **become more Patient led** and we see a shift towards **Pt led dialogue** for the **eL group**. The pattern changes as this theme is known to be of concern for patients.

Turning to the discussion of attitudes and emotions the pattern, again, is quite different. Here the UC group remains in the Physician led monologue pattern but for the 2 intervention groups the pattern becomes **Patient-led monologue.** In all 3 groups, there is little evidence of dialogue. This monologue pattern is of concern since Attitudes and Emotions towards Rx are recognized as important barriers to effective Rx-taking practices.

Finally, for discussions of adherence, though we observe a **Physician led** pattern in all 3 groups, there is a shift towards **more dialog**ue in the 2 intervention groups.

It is of note, that for the **UC** group, whatever the theme discussed,we found a **Physician-led monologue pattern** illustrating that, without patient training to increase their participation in the encounter, physicians typically adopt a role of information provider and the patients a “passive” listener role.

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These 4 Sky views help us grasp, at a glance, the variability of Rx discussion patterns as a function of the theme broached and the study intervention confirming that MEDICODE has the ability to detect subtle differences in medication talk.

**Slide 9**

This study focuses on the use of Topical CS, one of the most frequently prescribed medications in dermatology and a class of Rx for which patient medication-taking practices are sub optimal.

**Slide 10**

Generally, for all themes, the intervention was successful. Its effect was greater for discussions of Rx adverse effects and attitudes and emotions, two themes of importance because of patient corticophobia.

**Slide 11**

Now we turn to the following question:

“Can we use MEDICODE themes and indicators to predict clinical outcomes?”

This is a longitudinal study of consultations between adult asthmatic patients and GP

**Slide 12**

This table reports results of a multivariate analysis to identify communication predictors of asthma inhaler adherence at a 3 month FU visit.

The blue frame includes predictors derived from MEDICODE.

A higher number of asthma medications discussed,

A higher number of themes discussed per asthma medication,

Referring to the asthma medication by its name,

A new asthma prescription

were **all significant predictors** of improved adherence at 3 months.

Similar predictors were found for symptom control at the FU visit.

**Slide 13**

Another clinical outcome of interest for patient engagement and effective medication-taking practices is patient recall.

**Slide 14**

This multivariate analysis reveals that **content** indicators, such as number of themes discussed and medication status, AND **interaction** indicators (PI and DR) **both** predict better recall of information on medications.

**Slide 15**

Let us now summarize what we see as the value of MEDICODE in understanding the complex issue of medication discussions.

As we have just seen, MEDICODE can…

**Slide 16**

Here are the main take home messages

**Slide 17**

**In conclusion**

**Slide 18**

Thank you for your attention!