
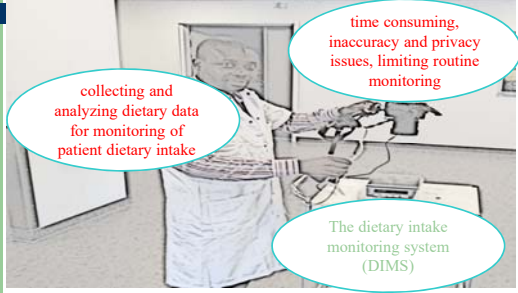


Using DIMS for Real-Time Monitoring of Patient Dietary Intake and Plate Waste: A Pilot Study at Herlev Hospital

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Introduction



collecting and analyzing dietary data for monitoring of patient dietary intake

time consuming, inaccuracy and privacy issues, limiting routine monitoring

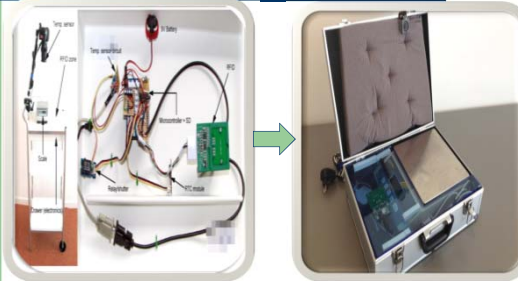
The dietary intake monitoring system (DIMS)

2

Aims

- This paper presents the development and the feasibility of using the DIMS 2.0
- for the purpose of real-time monitoring of patient dietary intake and plate waste.
- in a study aimed at evaluating a new meal serving system at Herlev hospital.

Development of DIMS (1.0 to 2.0)



What is new about the DIMS 2.0

- Real-time data capture and analysis

The diagram illustrates the data capture process. A teal box labeled 'Patient Id weight image' is connected by a dotted line to a green cloud labeled 'Data transmission via wireless'. A lightning bolt symbol points from the cloud to a blue document icon labeled 'DIMS Application'.

Automatizing real-time data analysis

- For monitoring of dietary intake and plate waste
- How ?
 - Using DIMS application (on tablet) for real time
 - View cases
 - Meal analysis
 - Waste analysis
 - User interactive analysis

Overview of the application on tablet

The image shows two screenshots of the DIMS application on a tablet. The top screenshot, titled 'List of meals', displays a table with columns for ID, Date and time, Identification, Weight, and Options. The bottom screenshot, titled 'Match results', shows a table with columns for Identification, Weight, Post weight, Time, and Post date.

Meal analysis output on the tablet

Identification	Pre weight	Post weight	Time Spent	Pre date	Post date	ID
425:LFED	290	230	09:15:05	2016 04 29 12:25:05	2016 04 29 12:36:15	25:38

The image displays a grid of six photographs showing plate waste analysis. The top row is labeled 'Pre picture' and the bottom row is labeled 'Post picture'. Each column shows a plate of food before and after consumption.

Interactive interface- User input

- Application: co-creational mode
- Interactive interface
 - User can add inputs
 - improve accuracy portion size estimation



Methods

- Prospective study
 - Medical & surgical wards.
 - 9 weekdays in the pre implementation phase
- DIMS 2.0
 - Collect paired before and after photos & weight of plate
- Ethical consideration
 - Patients oral consent.

Results

- Real-time data of 104 plate contents before and after were captured on the mobile tablet
 - portion consumed
 - plate waste
 - 2 minutes time frame for generating a complete patient dietary report.



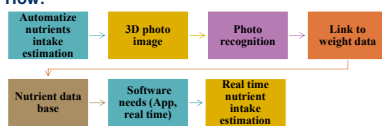
Conclusion

- DIMS 2.0 application facilitates a real-time monitoring of patient dietary intake and plate waste.
- Allows an investigator to have a quick and efficient overview of a patient with inadequate food intake.
- Photos of before and after meal servings can be used for guiding improved personalized meal serving.

Where are we?

- Automatize real-time monitoring of nutrient intake

- How:



Research Team

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Q & A