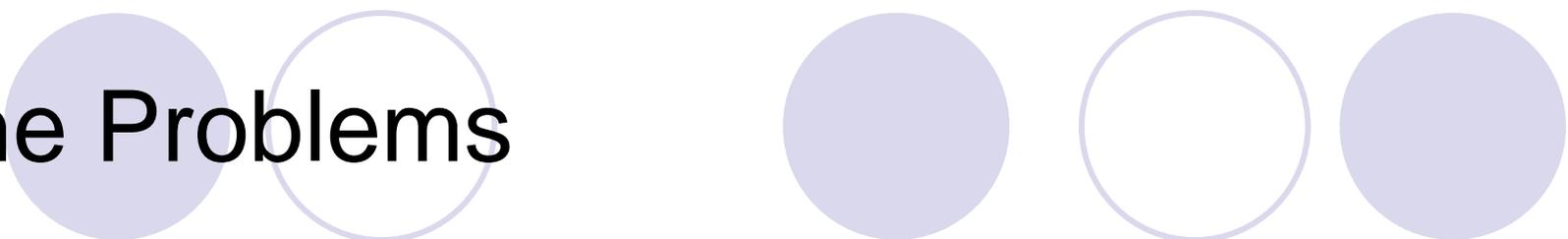
The slide features a decorative arrangement of six circles. Three circles are filled with a light purple color, and three are hollow with a light purple outline. They are arranged in two rows: the top row has three circles, and the bottom row has three circles. The title text is overlaid on the top row of circles.

***Integrating Radiation Oncology
workflow with HIS***

**Rishabh Kapoor, MS
University of Florida**

The Problems



Lack of information exchanged between Radiation Oncology information system (ROIS) with Hospital Information System (HIS). Specific Issues are:

- Inbound Patient Registration or Demographics information (ADT)
- Outbound Billing information
- Outbound Radiation Oncology scheduling and treatment summary.

How it currently works

1. Patient registration and demographics information

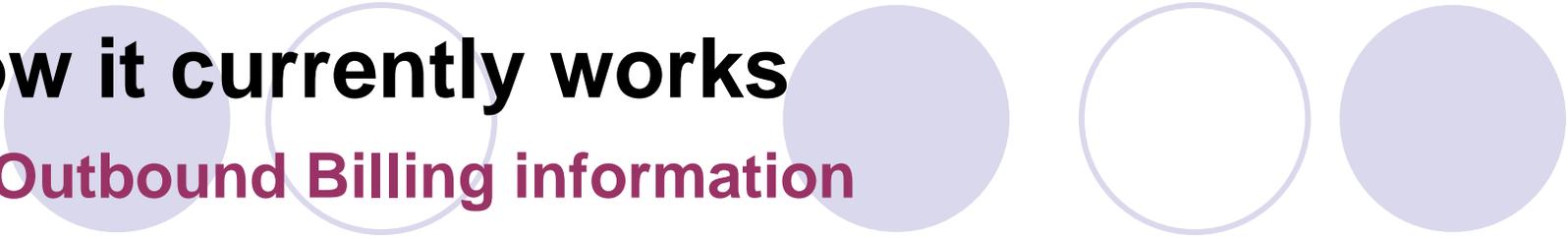
- **Staff enter patient registration & demographic data multiple times.**
 - Patient's initial visit to Radiation Oncology Clinic
 - At imaging modality
 - At treatment planning workstation
- **Patient info is manually read from HIS and typed into Radiation Oncology Application**
 - Time consuming
 - Error Prone
- **Changes in patient info in HIS does not reflect automatically in ROIS and vice versa.**
 - Change in family name
 - Change in Medical record number
 - Change in Patient's address.

How it should work

1. Patient registration and demographics information

- Patient info to be entered in HIS / ROIS.
- On patient's initial visit the ROIS queries the HIS or a newly created HL7 archive actor for the patient's demographic information.
- The patient's registration and demographic data would be stored in the archive.
- This would reduce repeated entry of data & thus avoid mistakes.
- Changes in the patient's registration and demographic data would trigger an HL7 update to be sent from HIS to ROIS. This would help keep both HIS and ROIS data in sync.

How it currently works



2. Outbound Billing information

- Billing information generated manually or automatically when scheduled procedures are completed.
- Billing info stored in archive.
- Billing staff extracts this info, verifies its accuracy and enters it into hospital billing system
- Manually data entry is error prone and inefficient. This can lead to loss of revenue or might cause the claim to be queried or refused by the medical insurance provider.

How it should work



2. Outbound Billing information

- The billing information should be stored in the archive.
- In order to have evidence based billing, objects like RT treatment record would be verified.
- The billing staff would extract this info from archive, review it and send it electronically as a financial transaction message (HL7 DFT) to Hospital billing system.
- This would reduce errors and every record which is sent for billing would have an automatic corresponding evidence for the medical insurance providers to check on.

How it currently works

3. Radiation Oncology schedule, and Treatment summary.

- The schedule of Radiation Oncology treatments reside only in the ROIS, and are not available to other clinics of the hospital.
 - Scheduling conflicts
 - Other clinics do not have a summary information about the radiation treatment, in order for its clinic's staff to be aware of any radiation related issue.
- Access to all aspects of patient's medical history including schedule of radiation treatments would be crucial to diagnosis and treatment of patients suffering from trauma and admitted to ER.

How it should work

3. Radiation Oncology schedule, and Treatment summary.

- The patients scheduling should be done in ROIS. These appointments should be stored in archive.
- Immediately these appointments should to sent to the HIS.
- Modification or deletion of appointment in ROIS should be reflected in HIS and vice versa.
- If appointments are made in the HIS it should be reflected in the ROIS and appointment be stored in archive.
- A treatment summary record could be generated by the ROIS and sent to the HIS appointment scheduling software to make the make the other clinics in hospital understand the status of radiation treatment of the patient.