

# **Enhancing patient-centered care by increasing speed of patient services**

#### Dr R R Sudhir

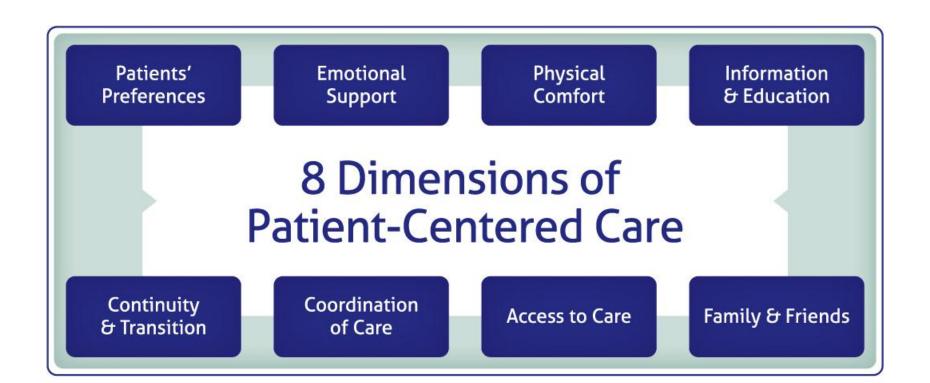
MBBS, DO, DNB,MPH (JOHNS HOPKINS USA)) Senior Consultant - Cornea Services Head Dept of Preventive Ophthalmology Consultant-incharge Electronic Medical Records Sankara Nethralaya Chennai





#### Patient centered care

Patient-centered care : improving the patients' clinical outcomes and satisfaction rates by improving the quality of the doctor-patient relationship, while at the same time decreasing the utilization of diagnostic testing, prescriptions, hospitalizations, and referrals.





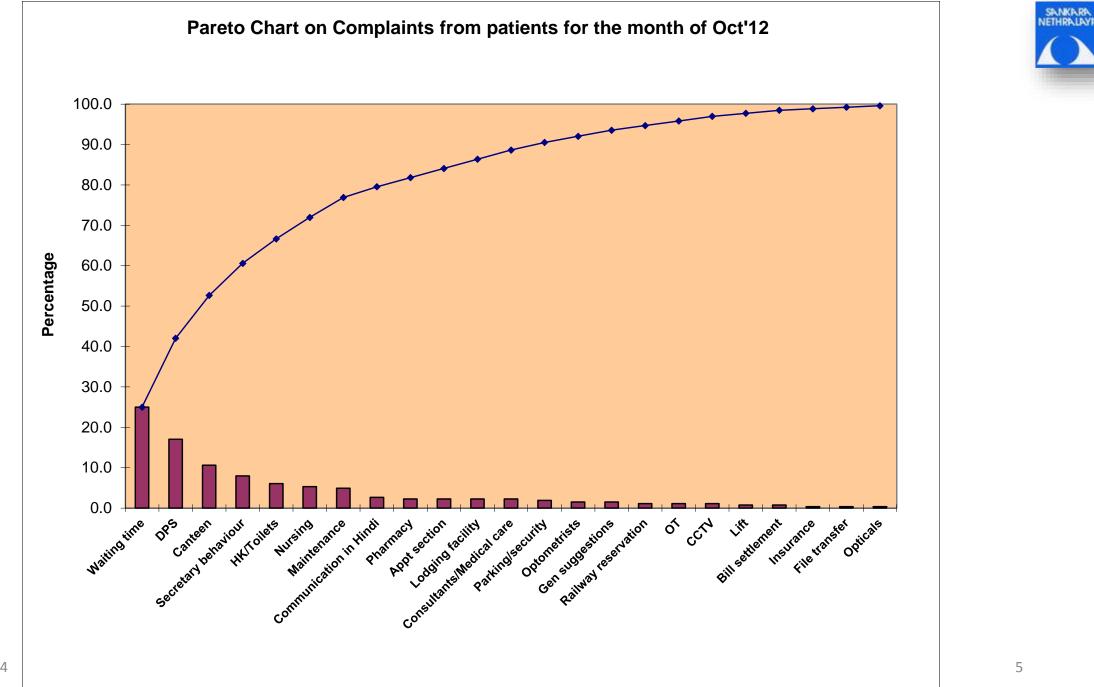
#### Patient Centered care

- Respect for patients' values, preferences and expressed reeds
  Coordination and integration of care
  Information and education
  Physical comfort
  Emotional support and allocation
- Emotional support and alleviation of fear and anxiety
- Involvement of family and friends
- ty and transition
- cess to care



# Service Processes and their Importance

- A Service set of interrelated activities together in sequence
- Good service processes created satisfied customers, reduce costs and underpin financial performance
- Processes must be understood and managed end to end



5/11/2014

#### Patient services in a hospital

#### **Out Patient services**

- OPD Clinic visit Doctor / Investigation
- Pharmacy
- Lab
- Medical Transcription
- Optical dispensing

#### Inpatient services

- IP Admission Medical / Surgical treatment – Discharge
- Stay / Ambulatory service

#### Patient services in a hospital

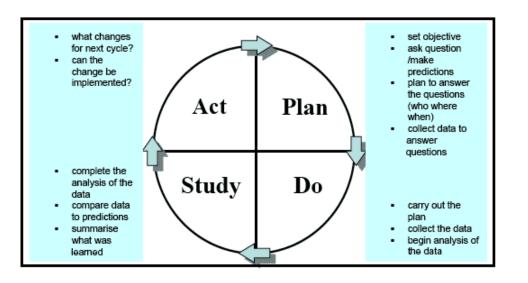
#### **Out Patient services**

- OPD Clinic visit Doctor / Investigation
- Scheduled Appointments -
- Walk-in
- Hybrid system

Type of appointments Regular Review Cross consultations Glass appointment Post OP visit .. etc

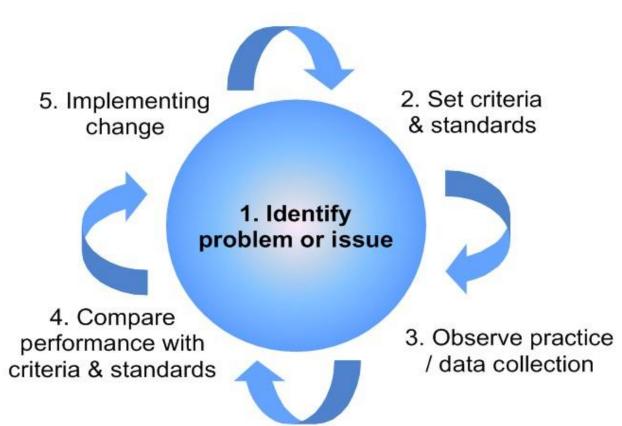
### Change management Principles

- PDSA Cycle
- LEAN
- Six Sigma
- Root cause Analysis
- Process mapping





 Clinical Audit : " A quality improvement process that seeks to improve patient care & outcomes through systematic review of care against explicit criteria and the implementation of change"



### Gaps at Hospital

#### • A different perspective using lean thinking:

- Waste: waiting, errors Muda 無駄 Uneven workload, variability Mura - Busy Monday, light Friday - ORs, inpatient beds Stress of overburden Muri - Physicians, nurses, clerks, managers running faster
  - Nurse and physician shortage

Loads of Waste in Healthcare >=30%)



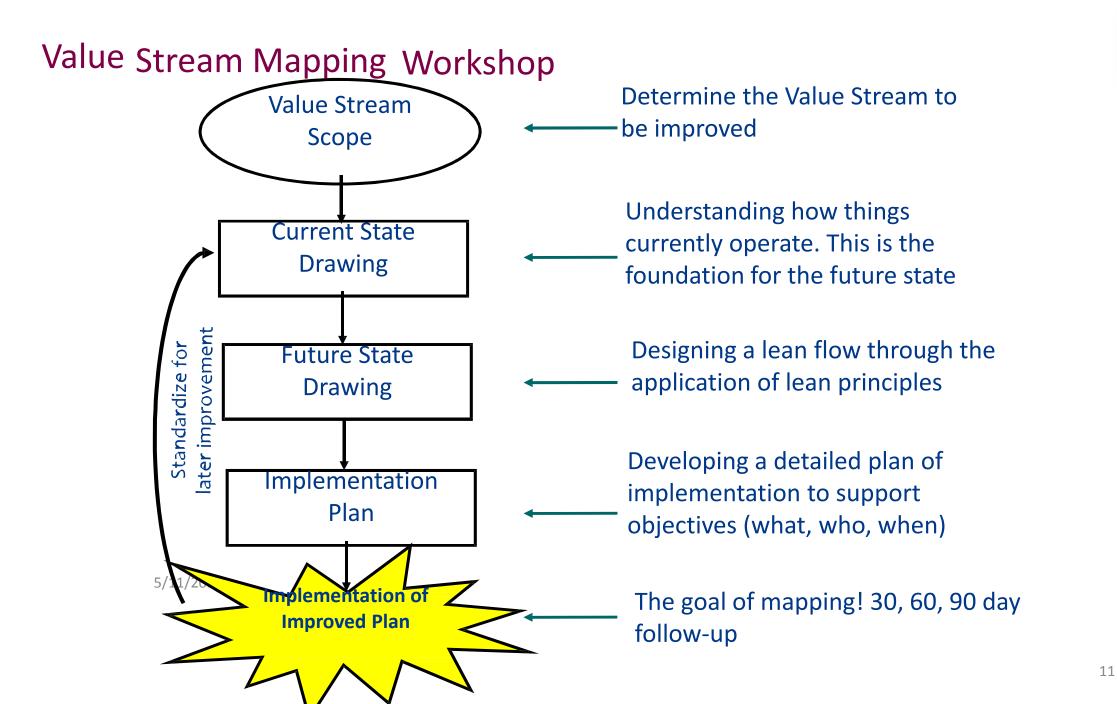




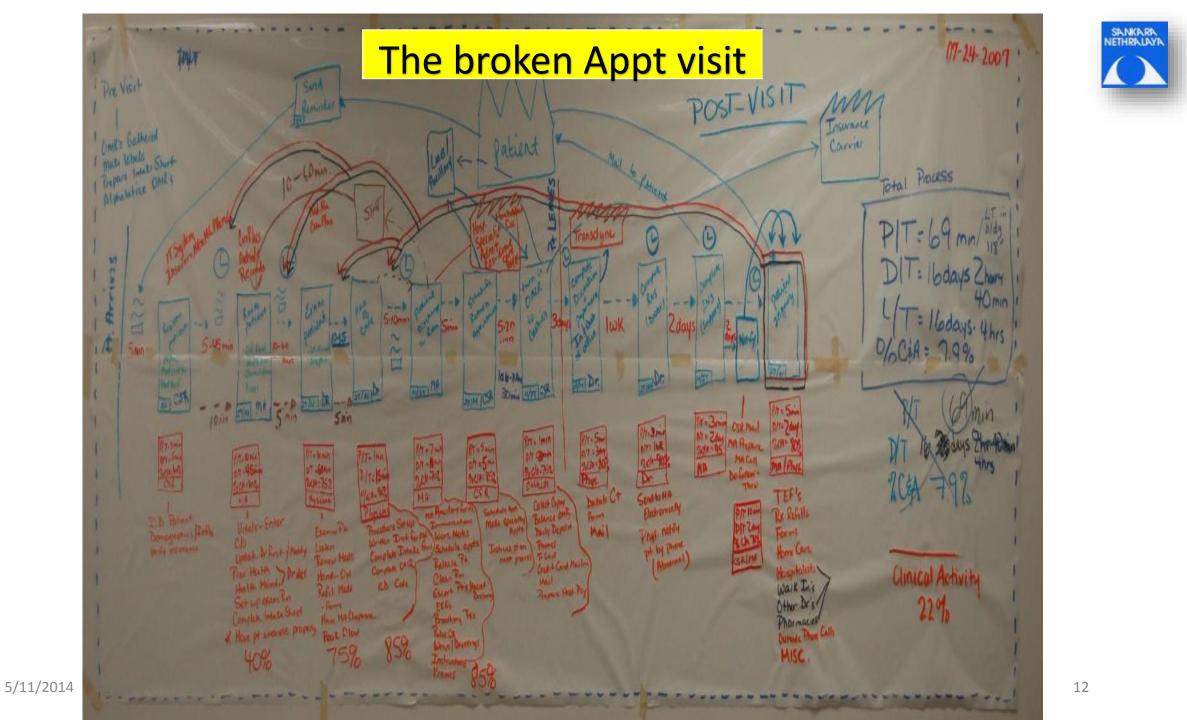


### Womack's 5 Steps of Lean Thinking Applied to Healthcare

- 1. Specify value from customer's perspective
- 2. Identify the value stream for each service, and remove the waste
- 3. Make value **flow** without interruptions from beginning to end
- 4. Let the customer **pull value** from the process
- 5. Pursue perfection continuous improvement
  - Do this every day in all your activities



ETHRALA





#### Patients day out @ SN



**Communication Dept** 



Parking



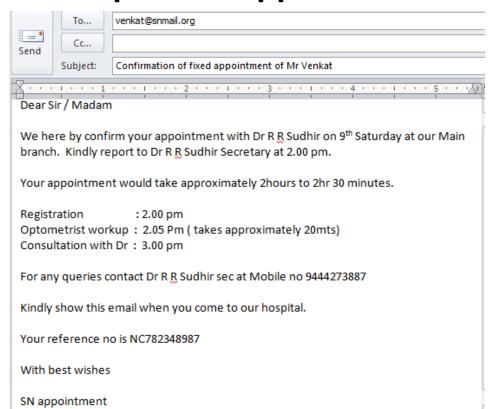




#### Send an Automatic SMS & Email

- Confirmation of booked appointment
- Reminders for appointment 24-48 Hrs prior to appointment.
- Reminder letters









**Communication Dept** 



Parking

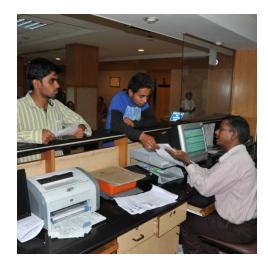




#### • Information & Signage



















- VIP patients
- Fast track the process and provide special waiting area
- Fast Track services Cataract Surgey Child Friendly atmosphere









#### Volunteers

• SWAN : Sankara Nethralaya Women Auxillary Network











SANKARA NETHRALAYA

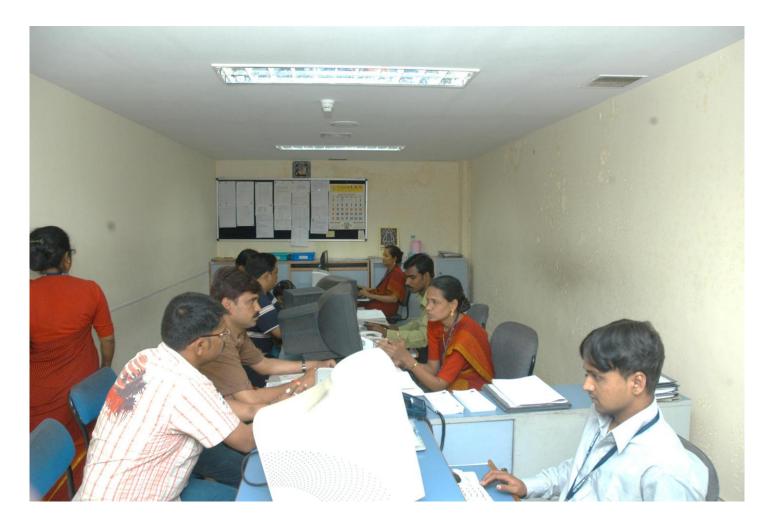


#### **Consultant Secretaries**





### Counselling









Canteen

Food court







Wash rooms



### Availability of patient record in time

- Case Study : Sankara Nethralaya MRD
- > 2.5 Million files (1978-2013)
- >1200 patients / day (500:New)
- >100 Surgeries /day
  - Huge Storage space and man power





MRD (User : tt, Dat	:e:04-Apr-	2013, Server : A	PPSER¥ER3	)				
IAIN-3008 MRD	) No. 📘	1102	KRI	SHNAN DR M				
		PER FILE						
				File Trac	k System			
Reg date	Login F	lag Taken for		narks	K System	place	location	empid 🔺
4/4/2013 6:45:41 PM	main R	}	OP	DISC		MEDICAL REC	ORDS D MAIN	
4/4/2013 6:45:22 PM	main R	}	ED	APPT		PATIENT SER	VICES-N MAIN	
(								▼ ►
<u> </u>		OutPatient Appoint	ments			OP Appointm	ent Details	
	Loc Treat	Fxd Time Sta	us Speciality		Appt Date Doctor	Remarks1	Remarks2	Fixed On
17 Jan 2012 PHY			PHY	1/17/2012	09 Apr 2013 TSS 09 Apr 2012 TS	C/0 MR JALK		02 Apr 2013
17 Jan 2012 TS 17 Jan 2012 TSS		HPN 16:00 R PTB 16:21B	VR PEA	1/17/2012	09 Apr 2013 TS	c/o. DR TSS		02 Apr 2013
	MAIN PO	HPN 08:40 N	VR	1/20/2012				
	MAIN PO	HPN 08:55 R	VR	1/24/2012				
	MAIN PO	hpn 08:40 R	VR	1/31/2012		InPatient App	pointments	
	MAIN PO	HPN 08:45 R	VR	2/7/2012		rgery	Doct Eye	
	MAIN GA Main ga	sbm 11:00 R hpn 10:45 C	VR VR	2/21/2012	· ·	V+SB TURE REMOVAL	TS OD TS OD	
		HPN 08:33 N	VR	2/24/2012	07 Mar 2012   50	TOHE HEMOVAL	113 100	
	MAIN REG		VR	3/2/2012				
		ANU\$ 08:40 R	VR	3/6/2012				
	MAIN PO	sang( 08:45 R	VR	3/9/2012		Company / Referral	/ Service Details	
	MAIN REG	sang(14:40 R siv 11:48 N	VR VB	3/16/2012 5/22/2012	TITLE	REFERREDBY	SEEN BY REGDI	DATE TYPED ON C
		HPN 10:38 R	VR	8/24/2012				
20 Nov 2012 TS		SPB 17-05 B	VR	11/20/2012				Þ
	15 . 17		112					
Name Sca	ned Data Inf	formation - JUd	<u>vssev and Koo</u> Mrc		)octor Registered On 1	Case Summary R yped On Rem	equests harks	
KRISHAN DR M			111					
(				•				
MRD OP		MRD I	,	Appt.Query	Appt. Reports	MRD Info	Sheet	Exit
								<u></u>
		. 6			na f			
Start 🔤 🔂 MRD (	User: tt, D	ate 😰		💽 Microsoft Power	Point - [			<b>« 🐻 😏</b> 6:48

SANKARA NETHRALAYA



### File tracking System

_		OUT GOING REGISTER				_ 🗆 🗙
	FILE	TRACKIN	G SYS	ТЕМ		
Message	IN -Mrd No:11102	MAIN> Successfu	lly inserted			
Appt On	4 / 4 /2013 💌				<b>v</b>	Bulk Entry
Mrd No.	11102 .				⊙ In	O Out
Taken By			Taken For			-
Department	MEDICAL RECORDS	B DEPT	Location MAIN	4		•
			Purpose			-
Remarks						
Kernarko	OP DISC					
		Today - Out	Going Files			
•						
			M		0	<b>I</b> ,
<u>I</u> nsert	Modify	<u>D</u> elete <u>V</u>	iew <u>S</u>	ave <u>C</u> a	ncel	E <u>x</u> it







#### Comput Methods Programs Biomed. 2010 Dec;100(3):283-8. Epub 2010 May 11

Comparison of documentation time in Paper and Electronic Medical records by Optometrists at Eye Hospital in South India: A Time motion study

#### Shabbir SA, Ahmed LA, Sudhir R R, Scholl J, Li YC, Liou DM.

	Paper records mean (SE)	Electronic records mean (SE)	Estimate of change (95% confidence limits)	p value
Crude	19.7 (0.71)	20.4 (0.71)	-0.64 (-2.6 to 1.3)	0.53
Sex adjusted	19.4 (0.74)	20.1 (0.73)	-0.74 (-2.7 to 1.2)	0.46
Age adjusted	19.8 (0.96)	20.3 (0.69)	-0.48 (-2.4 to 1.4)	0.62
Work intensiveness score adjusted	19.6 (0.95)	19.2 (0.99)	0.39 (-1.5 to 2.2)	0.68
Age, sex & work intensiveness score	19.0 (0.96)	18.6 (0.99)	0.43 (-1.4 to 2.2)	0.64
adjusted				

Comparisons of means of time-spent between electronic and paper records.

Work intensiveness score: 1: Vision check up; 2: 1+ slit-lamp examination and measuring intra ocular pressure (IOP); 3: 1+2+ Gonio/Pachy (special examination done for Glaucoma patients).







Ele	ectronic Medical Records
	drrrs
sername:	diffs
assword:	•••••
ocation:	SN MAN 🗸
	Login Reset
	Biometric Login Forgot Password?

Copyright 2010. All rights reserved.

Designed & Developed By: TATA CONSULTANCY SERVICES

🕘 Done



### Snap shot of what is happening in the clinic

To be s	een (9)	Already seer	n (20)	20) Not reported (10) All (42)		Waiti	Waiting for workup (3)				
Appt Time	Reg Time	MRD Number	Patient Name				Treatment Code	Waiting time	Appointment ID	Patient Status	
15:55	15:21	16980	MR . NILESH	BHANDARE			REG (NEW CASE)	01:17	APPT/01/050514/000403	TS	
17:10	15:30	11952	MRS.PADMA	JA PANDURANG KAMAT			SRE	01:08	APPT/01/050514/000164	TS	pt is alre
15:35	15:44	201202_16217	MR . PUNDLI	K DENDGE - (CGHS Pensioner)			REG	00:54	APPT/01/050514/000027	тя	
15:05	15:45	201202_16219	MRS . NANDA DENDGE - (CGHS Pensioner)				REG	00:53(WI)	APPT/01/070514/000403	тз	
14:45	15:04	16977	MS . SUMEDHA N TARE				REG (NEW CASE)	00:53	APPT/01/300414/000300	но	
16:10	16:00	201305_3124	MR . RAMESH POTNIS - (CGHS Pensioner)				SRE	00:38	APPT/01/300414/000335	тз	
15:45	16:09	16984	MR . RAMRAO PRABHAKAR PAWAR				REG (NEW CASE)	00:29(WI)	APPT/01/070514/000413	TS	
16:05	16:13	200903_13872	MRS . SUDHA C DESHMUKH - (CGHS Pensioner) (Safety)				REG	00:25	APPT/01/030514/000279	TS	
16:40	16:19	16985	MRS.CHITR	A TARUN DEY - (CGHS Working)			REG (NEW CASE)	00:19	APPT/01/050514/000085	тя	

New - New Patient | WI - Accommodation | SI - Signed In | SO - Signed Out | H



### Snap shot of what is happening in the clinic

To be s	e seen (9) Already seen		n (20) Not reported (10)		rted (10)	All (42)	(42) Waiting for workup (3)					
Appt Time	Reg Time	MRD Number		Patient Name				Treatment Code	Waiting time	Appointment ID	Patient Status	
15:55	15:21	16980	MR . NILESH	BHANDARE				REG (NEW CASE)	01:20	APPT/01/050514/000403	TS	
17:10	15:30	11952	MRS.PADMA	UA PANDURANG K	АМАТ			SRE	01:11	APPT/01/050514/000164	TS	pt is alre
15:35	15:44	201202_16217	MR . PUNDLI	MR . PUNDLIK DENDGE - (CGHS Pensioner)					00:57	APPT/01/050514/000027	TS	
15:05	15:45	201202_16219	MRS . NANDA	Departure rooting	SIGNED IN BY	No one has Si	aned In	REG	00:56(WI)	APPT/01/070514/000403	TS	
14:45	15:04	16977	MS.		DATIENE STAPLS	ED IN BY	neultation	one has Signe	ad In	APPT/01/300414/000300	но	
16:10	16:00	201305_3124	MR.			ENT STATU		ting for Consi		APPT/01/300414/000335	TS	
15:45	16:09	16984	MR.			OMETRIS				APPT/01/070514/000413	TS	
16:05	16:13	200903_13872	MRS		Wai	ting Time	00:5	9:36		APPT/01/030514/000279	TS	
16:40	16:19	16985	MRS					tation/T+ Bot	h Eyes	APPT/01/050514/000085	TS	
					Dila	tation Tir	ne 00:4	7:39	New	Patient   WI - Accommodation   S	I - Signed In   SO - Sign	ned Out   F
			1.1		Crea	ate_by	KAI	ICHAN R KA	MBLE			
			65 Y	/ Male	Con	firmed_b	y Bali	d Anita O.				



#### Transparency in Waiting time

#### • Current Patient flow for Dr ABC

To be s	een (9)	Already seer	n (20) Not reported (10) All (42) W		w	Waiting for workup (3)			Contrast of the contrast of th	IF         100	
Appt Time	Reg Time	MRD Number	Patient Name					Treatment Code	Waiting time	Datasef of Work Datasets of State 240 AT at the Working Datasef of Work Datasets 332 2346 AT at the Datasef of Work Datasets of State 246 AT at the Datasef of Work Datasets of State 246 AT at the Datasef of Work Datasets of State 246 AT at the Datasef of Work Datasets of State 246 AT at the Datasef of Work Datasets of State 246 AT at the	All and a set of the s
15:55	15:21	16980	MR . NILESH	BHANDARE			RE	EG (NEW CASE)	01:17	Denny Diversity (1977-246) 64 cm [Margada Denny M (1977-246) 64 cm [Margad	In Contract of Hole 214         210           If Contract of Hole 214         216           If Contract of Hole 214         210
17:10	15:30	11952	MRS.PADMA	JA PANDURANG KAMAT			SR	RΕ	01:08		C LG
15:35	15:44	201202_16217	MR . PUNDLI	K DENDGE - (CGHS Pensioner)			RE	G	00:54	APPT/01/050514/000027	TS
15:05	15:45	201202_16219	MRS . NANDA	DENDGE - (CGHS Pensioner)			RE	G	00:53(WI)	APPT/01/070514/000403	TS
14:45	15:04	16977	MS . SUMEDI	IA N TARE			RE	EG (NEW CASE)	00:53	APPT/01/300414/000300	но
16:10	16:00	201305_3124	MR.RAMESH	POTNIS - (CGHS Pensioner)		SR	E	00:38	APPT/01/300414/000335	TS	
15:45	16:09	16984	MR . RAMRAO PRABHAKAR PAWAR					EG (NEW CASE)	00:29(WI)	APPT/01/070514/000413	TS
16:05	16:13	200903_13872	MRS . SUDHA C DESHMUKH - (CGHS Pensioner) (Safety)					G	00:25	APPT/01/030514/000279	TS
16:40	16:19	16985	MRS.CHITR	A TARUN DEY - (CGHS Working)			RE	EG (NEW CASE)	00:19	APPT/01/050514/000085	TS

New - New Patient | WI - Accommodation | SI - Signed In | SO - Signed Out |

### Patient waiting time



#### Reasons

#### **1. Optometry related**

work-up delay, less man-power, less rooms, intern doing work-up

#### 2. Waiting at various nodal points

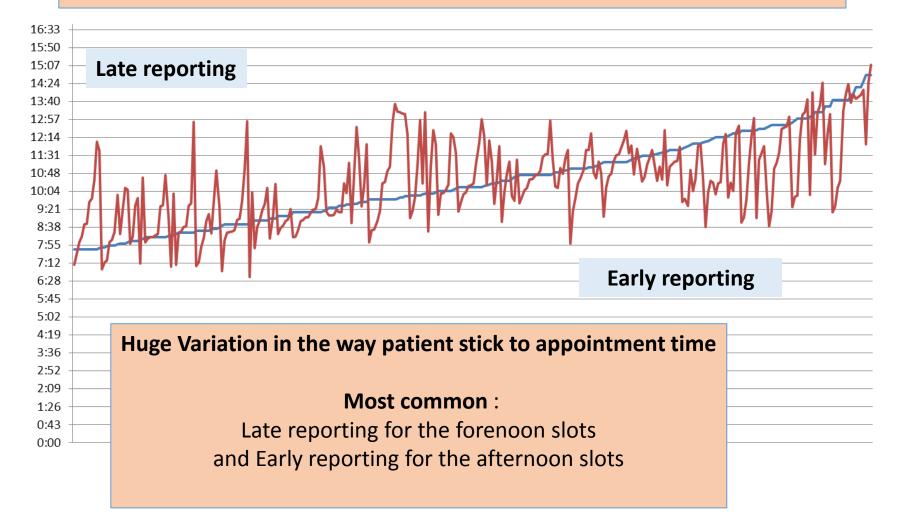
- entrance, reception, billing, dilatation, cross-consultation and investigations, late reporting,
- late coming of staff/slow consultants
- 3. System related:

overlapping in the appointment schedule, single room for consultants, EMR, teaching to residents and so on

#### Difference in Appointment time and Reporting time

SANKAR

ETHRALAY





#### Patient waiting time

#### Huge Optometrist *waiting time*

No strict discipline with appointment timing by the patients and by secretaries who register appointments

#### Bottle neck: *Optometrist workups and Consultants time*



We can widen Optometrists workup time by distributing files among optometrists



#### Patient waiting time

## Consultant *waiting time*

But the consultant bottle neck is difficult to widen and this can be solved only with buffer slots.

And tagging consultant slots with optometrists slots and giving buffer slots to both and strict disciple of appt slots. *lost time by drops outs cannot be compensated* 

**Drop outs** 

Accommodation possible only in available buffer slots

#### Buffer slots and Tagging consultant slots with Optometrists slots



						Buffer			
Time	optometrist 1	Optometrist2	Buffer slots	Cons time	Slot no	slots	Cons time	Slot no	Buffer slots
				9.10	1		13.40	21	
8.00	1		b1	9.20	2		13.50	22	
8.20	2	3		9.30	3		14.00	23	
8.40	4	5		9.40	4		14.10		B5
9.00		6	b2	9.50	5		14.20	24	
9.20	7	8		10.00	6		14.30	25	
9.40	9		b3	10.10		B1	14.40	26	
10.00	11	10		10.20	7		14.50		B6
10.20		12	b4	10.30	8		15.00	27	
10.40	13	14		10.40	9		15.10	28	
11.00	15		b5	10.50	10		15.20	29	
11.20		16	b6	11.00		B2	15.30		B7
11.40	17	18		11.10		B3	15.40	30	
12.00	19		b7	11.20	11		15.50	31	
12.20		20	b8	11.30	12		16.00	32	
12.40	21	22		11.40	13		16.10	33	
13.00	23	lunch		11.50	14		16.20	34	
13.20	lunch	lunch		12.00		B4	16.30		
13.40	lunch	24		12.10	15		16.40		
14.00	25	26		12.20	16		16.50		
14.20	27		b9	12.30	17		17.00		
14.40		28	b10	12.40	18				
15.00	29	30		12.50	19				
15.20	31	32		13.00	20				
15.40	33	34		13.10	Lunch				
				13.20	Lunch				
				13.30	Lunch				



### Buffer slots and Tagging consultant slots with Optometrists slots

#### **Advantages**

- Smooth flow
- Will be able to address late coming of patients and also accommodate patients in Buffer slots
- As appointments are staggered with good cushion less clogging at Bottle necks

#### **Advantages**

- Need more counseling during appointment fixing about the strict adherence to the time and chance of cancellation or to expect long delays if they miss appointment slot
- Need entire process streamlined and to modify according to the feedback of the results.

- 4



		)Number		tClear	JKCN	٠		Dr	]						
Ī		ntName:						No. of Concession, Name	-	The second s					
	<u>SINo</u> 1	MRNum 1082367	<u>PatientName</u> KIRUBAKAR PHILI P	ReportTime	ApptTime 13:30:00	Splty COR	Int REG	Dr	RegTime 12:08:20	OptoInTime 12:36:24	OptoOutTime 13:02:30:9	<u>Consitin Time</u>	ConsitOutTime	WaitingTime 03:23:34	File Lyp Paper
	2	705059	KARTHIK BALA P	07:55:00	09:10:00	VR	REG	Dr PB	08:34:12	08:40:25	09:46:25:0	11:20:47	11:39:31:8	03:05:19	Electron
	3	787128	PUSHPARAJAN B	09:35:00	10:50:00	VR	REG	Dr PB	08:34:31	08:56:27	09:32:52:7	11:06:59	11:42:41:9	03:08:10	Electron
	4	1615610	SUJITH K SURESH	08:35:00	09:50:00	COR	REG	Dr NVN	08:34:58	08:40:07	09:13:01:6	12:27:35	12:27:59:1	03:53:00	Electron
	5	2823178	USHA SURESH	10:25:00	11:40:00	GEN	REG	Dr NVN	08:38:10	09:14:21	09:43:59:9	12:29:17	12:34:57:7	03:56:47	Electron
	6	669351	JAYANTHI K FS	13:45:00	15:00:00	COR	REG	Dr SAL	15:00:16	15:31:29	15:31:29:3			00:31:38	Electroni
	7	2932826	ARJUN VIJAYAKUMAR	09:05:00	10:20:00	COR	REG	Dr BSN	11:20:14	11:51:14	12:09:43:6			04:11:40	Paper
	8	811138	PERUMAL MUDALIAR A	12:15:00	13:20:00	COR	REG	Dr BSN	09:38:02	10:15:09	10:37:36:8	13:24:32	13:27:28:8	03:49:26	Electron
	9	811139	RANI	12:45:00	13:50:00	COR	REG	Dr BSN	09:38:54	09:54:03	10:15:01:9	13:15:48	13:27:34:5	03:48:39	Electron
	10	2060784	DHANAM SAMBANTHAM CFS	13:55:00	15:10:00	COR	REG	Dr SAL	11:41:00	11:47:39	15:15:57:0	15:16:54	15:16:55:7	03:35:55	Paper
	11	2823177	SRINIVASAN K	08:20:00	09:35:00	COR	REG	Dr BSN	08:33:38	08:57:58	10:56:43:4	11:23:08	11:25:44:5	02:52:06	Electron
	12	2119509	VIGNESH T V	13:15:00	14:30:00	COR	REG	Dr BSN	12:21:20	12:50:28	13:01:49:4			03:10:33	Alectron
	13	2179524	BISWAMBHAR TRIPATHY	11:05:00	12:20:00	VR	REG	Dr PB	10:04:50	10:41:32	11:05:06:8	13:43:40	13:48:25:3	03:43:35	Paper
	14	2164355	KUNJARI MANI	09:10:00	10:25:00	VR	REG	Dr PB	09:23:37	09:46:53	10:01:05:3	10:56:32	11:13:32:9	01:49:55	Paper
	5/11	12014				1.000		Th.	The summer of the		and the second se	and the second se			

Dr

111

Patient typ	e FDW - Search	Transfer T	o Reset	Close		
MRD	O PATIENTNAME	RESOUR	CEID REG	ISTRATIONTIME TO	KENNO PATIEN	NTSTATUS FILESTAT
1 298187	0 SUSEELA S	FDW	08:1	62		ELRC
2 298191	6 JAGADESH N	FDW	10:14	96	so	ELRC
3 298192	7 MD ANFAL HOSEN AYON	FDW	10:20	) 99	SO	ELRC
4 298193	0 SELVAM K	FDW	10:22	2 100	SI	ELRC
5 150664	2 ISTIHAD AHMED	FDW	10:24	102	SI	ELSC
6 298194	2 NISHALINI R	FDW	10:34	106	SI	ELRC
7 298194	8 NARASIMHALU P	FDW	N 10:42	109	SI	ELRC
8 298194	9 SHAMA LATHA T	FDW	10:44	111	SI	ELRC
9 298195	0 DHIRENDRA NATH DAS	FDW	10:40	5 112	SI	ELRC
10 293205	7 MANEK KANWAR BETALA	FDW	10:47	114	SI	ELRC
11 298195	3 DIPENDER SINGH	FDW	10:50	) 115	SO	ELRC
12 298195	7 PAVAN GANDHARVA	FDW	10:59	116	SI	ELRC
13 298195	8 JAWAID AHMAD	FDW	11:01	. 117		ELRC
14 298196	4 MAHADEV GHOSH	FDW	11:00	5 118		ELRC
15 298196	6 LALITA DEVI CHOUDHARY	FDW	11:07	119		ELRC
16 298197	0 RITIKA CHAUDHARY	FDW	11:09	120		ELRC
17 292173	0 VANITHA S	FDW	11:12	121		ELRC
18 252144	5 JASKETU USENDI	FDW	11:18	3 122		ELSC
19 298196	7 RUHIKAA	FDW	11:22	123		ELRC
20 298197	8 SAJIDA S	FDW	11:27	124		ELRC
21 298197	6 NEELU SAHU	FDW	11:32	125		ELRC
22 298198	3 ADITYA GURJAR	FDW	11:34	126	SI	ELRC
23 213809	6 MIRA DEVI AGARWALA	FDW	11:30	5 128		ELRC
24 298197	9 LAKSHMI R V	FDW	11:30	5 127		ELRC
255,298,128	14 NAYANA M V	FDW	11:41	130		ELRC
26 298199	2 VIVEK ANAND RHARATHY	FDW	11-41	129		FIRC





REH

Total

1210 1170

# Other tools

- Forecasting
- Resource management

<ul> <li>Floor design management</li> </ul>						UST	2181	2280		5391	5951		10749			1078	1335	1142	1174	1167	1262
					SEP	TEMBER	1973	1749	2006	5527	5228	5321	10365	9367	10434	1075	1022	1049	1097	967	1129
OCTOBER 1								1906	2032	3976	4375	4913	9101		10528	1033	1054	1129	1026	1106	1188
2011 ACT2012 EXP2012 DNAM-2012									2173	6016	5828	5954	10233	9772	10145	1072	1004	1081	989	978	1009
395 0 0 SUN 1 0 0 368 490 490 Mon 2 410 508	0 TUE 1 41	15 369 <mark>381</mark> Fri 08 329 <mark>330</mark> SAT	1 437 0	0 SUN 403 MON	1	414 433 476 363		/ED )41	2156	5806	5637	5763	11304	10604	11338	1499	1351	1374	1120	1085	1130
0 493 493 TUE 3 428 453 0 445 445 Wep 4 365 431	389 THU 3 38 329 FRI 4 330	31 0 0 SUN 30 439 365 Mon	3 0 431	500 TUE	3	413 394 379 355	340 F	RI 288	2501	4855	5435	5671	9252	10680	11623	1043	1327	1337	1083	1062	1194
514 507 <b>507</b> THU 5 389 319	283 SAT 5 0	0 440 416 TUE	5 500 364	413 WED 411 THU	5	340 0	0 S	UN )42	1962	4574	5511	5241	9480	10671	10203	1133	1158	1075	1076	968	947
439 437 395 FRI 6 329 0 448 375 368 SAT 7 283 520	410 Mon 7 41	16 391 408 THU	6 413 447 7 411 394	437 FRI 340 SAT	7	317 472 0 440	476 T	UE 15	2361	5042	6153	6042	10799	11704	11263	1174	1196	1095	1309	1196	1122
431 0 0 SUN 8 0 485 382 493 435 Mon 9 393 485	384 WED 9 42	16 446 433 FRI 22 428 347 SAT	9 378 436	0 SUN 403 MON		339 460 474 409	397 T	/ED 347	25455	59851	65892	66149	123413	126919	127285	14024	14410	13872	13601	13157	13477
0 468 450 TUE 10 459 476 435 448 405 WED 11 384 469	369 THU 10 433 334 FRI 11 34	3 0 0 SUN 7 500 460 MON	10 0 448 11 403 437	510 TUE 432 WED	10 11	371 349 397 369	354 9														
450 390 0 THU 12 359 411 405 0 0 FRI 13 334 0	293 SAT 12 0 0 SUN 13 46	0 415 508 TUE 60 425 416 WED	12 510 0 13 432 470	418 THU 466 FRI	12 13	386 0 354 446	339 M	UN CN	K	ULKATI		apur Only)		MAIN			NAVA			REH	
0 349 382 SAT 14 293 436 354 0 0 SUN 15 0 543	393 Mon 14 50 490 Tue 15 44	08 420 422 Thu 12 410 483 Fri	14 418 316 15 457 0	378 SAT 0 SUN	14 15	0 443	0 V	ive <b>age</b>			Average			werage			werage			werage	
239 464 398 Mon 16 400 477 0 523 484 TUE 17 490 410	366 WED 16 40 331 THU 17 48	03 365 420 SAT 33 0 0 SUN	16 363 436 17 0 357	449 MON 529 TUE	16 17	468 486 436 520		HU -12	2012-1320					011-122			011-122			011-122	012-13
398 526 482 WED 18 366 425 484 422 448 Тни 19 331 342	417 FRI 18 42/ 322 SAT 19 0	20 445 416 Mon 0 493 494 TUE	18 449 430 19 529 372	467 WED 390 THU	18 19	425 366 404 0		ат <u>80</u> un <u>о</u> 4	56	185	185		416	445	307	46	46	34	47	4/	36
482 419 354 FRI 20 417 0 448 402 239 SAT 21 322 409	0 SUN 20 416 400 Mon 21 494	6 434 442 WED 04 456 403 THU	20 467 408 21 390 307	457 FRI 363 SAT	20 21	350 538 0 491		ION 94		174	235		383	443	441	45	50	47	44	46	45
424 0 0 SUN 22 0 493 376 416 <b>438</b> Mon 23 396 484	462 TUE 22 42; 375 WED 23 45	24 375 428 FRI 53 333 412 SAT	22 466 0 23 402 392	0 SUN 389 MON	22 23	487 468 496 438	403 V	UE /ED 88		178	217	215	424	417	419	52	50	47	49	47	47
0 507 456 TUE 24 462 431 438 497 458 WED 25 375 430	381 THU 24 420 342 FRI 25 410	28 0 0 SUN	24 0 495	468 TUE 497 WED	24 25	403 479 385 337	415 F	RI 70	70	195	207	210	429	384	385	50	48	47	46	43	43
456 417 417 THU 26 381 351 458 374 424 FRI 27 342 0	384 SAT 26 0 0 SUN 27 420	0 531 470 TUE 24 420 424 WED	26 468 427	409 THU 466 FRI	26 27	415 0 364 483	0 S	UN 88	82	207	229	213	413	434	407	41	51	42	45	45	47
417 366 376 SAT 28 384 456 423 0 0 SUN 29 0 481	396 Mon 28 47	70 378 453 THU 31 358 428 FRI	28 409 0	402 SAT 0 SUN	28	0 466 474 462	496 T	ve /b		213	209		415	407	417	43	44	42	44	42	45
313 452 438 Mon 30 376 406	375 WED 30 43 381 THU 31 110	33 364 412 SAT		389 MON 468 TUE	30	520 391 462 414	385 T	но 76		209	190	182	396	392	390	45	42	42	45	44	44
9977 10680 9782 TOTAL 500 393 416 445 408 AVG 9968 11524 9		03410844 11010 TOTAL 4 417 423 AVG	111519995 112	254 TOTAL	1	074911272	10119 Tot	AL 80	84	231	233	229	394	391	390	41	40	42	38	39	39
383 443 3	<mark>82 A</mark> vg		429 384 433	3 <mark>A</mark> vg	4	113 434	_389 <mark>A</mark> ∀0	02		223	225		419	424	436	56	54	53	41	43	43
EXISTING CURRENT EXPECTED FORECASTING	TOTAL HOLIDAY SU	NDAY						92	93	194	217	210	402	427	430	45	53	50	47	42	44
· · · · · · · · · · · · · · · · · · ·	Summary								82	191	220	218	395	427	425	47	46	45	45	39	39
April May June July Yr Tot Avg Yr Tot Avg Yr Tot Avg Yr Tot			r Tot Avg Yr Tot	January Avg Yr Tot	Febr	Tot Avg	Vlarch Yr Tot Avg	89	91	194	237	232	400	433	433	43	44	42	48	44	43
2010 9522381 2010 9376375 2010 9327359 2010 9815364 2010 9454364 2010 8642360 20109285387 2010 8495340 2010 9679372 2011 9252402 2011 9480395 2011 10799400								89 <b>8</b> 4	81	200	217	211	407	419	407	46	47	- 44	45	43	43
2011 9977418 2011 9968383 201111034424 201111151429 201110749413 201110365416 20119101396 201110233394 201111304419 201210680427 201210671427 201211704433 201210691424 201311623430 201210671427 201211704433 201210691424 201311623430 2013110203425 201311263433										Тоти	1										
	[F	ORECASTING	G TOTAL	]																	

**JKCN** 

Total

2010-112011-122012-132010-11

Location

April

MAY

JUNE

JULY

Aucus

KOLKATTA(Mukundapur Only)

Total

2012-13

5665 11151

2011-12

MAIN

Total

9968 11524 11901

9995 10392

4110 9977 10680 7976

5385 11034 10844 10486

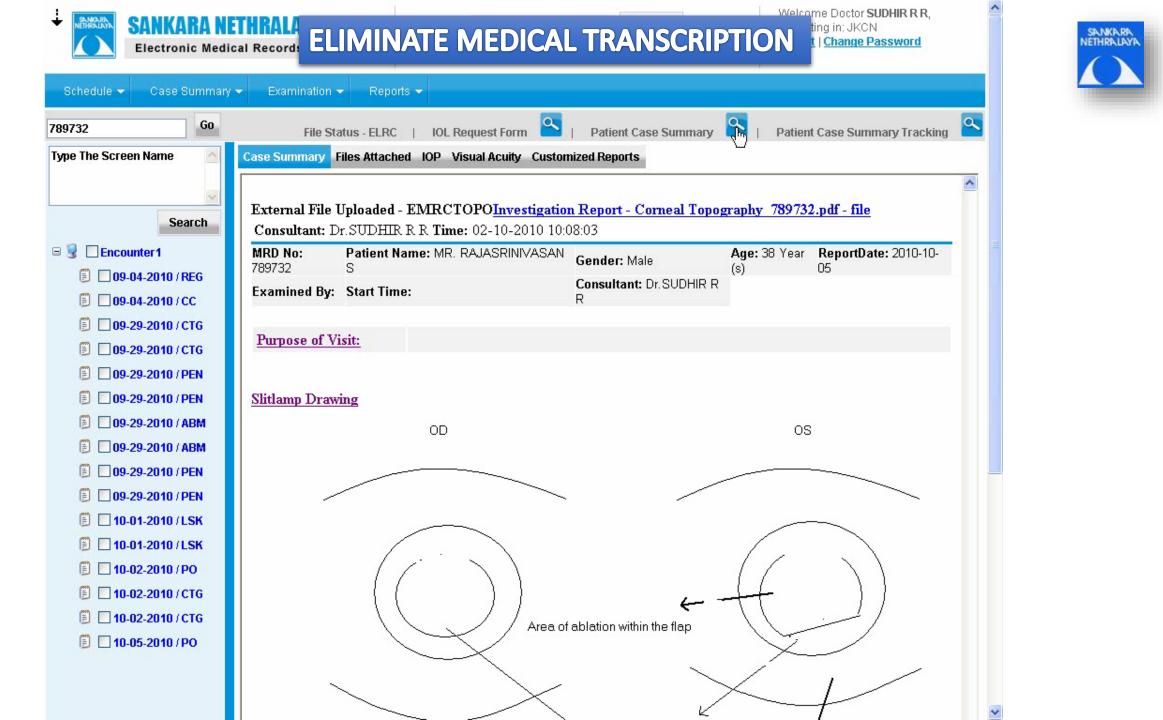
5757 10740 11272 10006

NAVA

Total

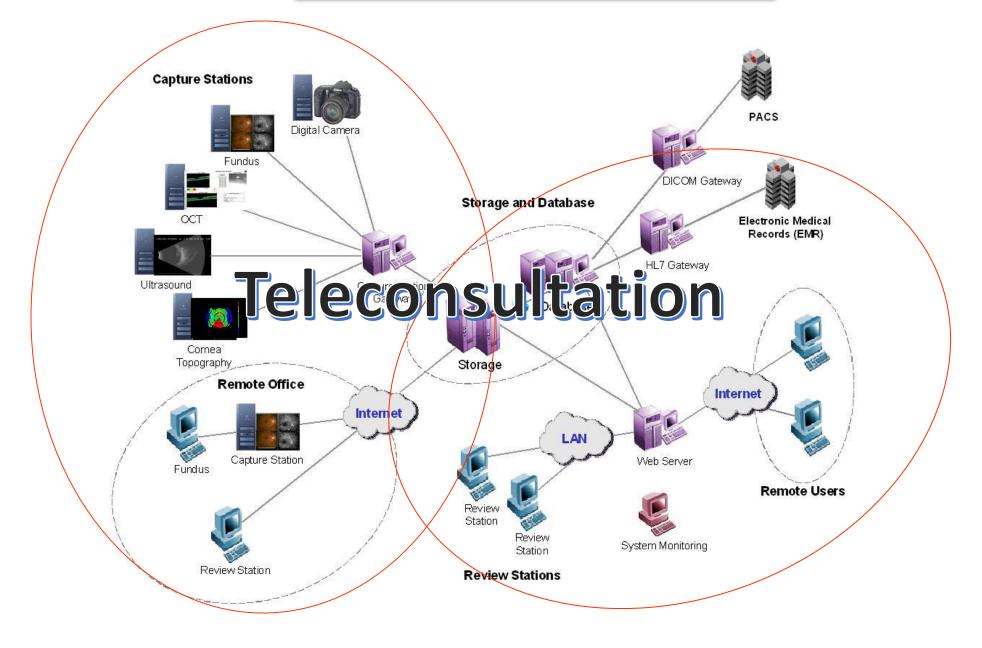
2010-112011-122012-132010-112011-122012-132010-112011-122012-13

1109 1109



#### **Reducing Investigation visit time**







# Patients Day out @ SN – Optical services

- Fast dispensing 1 hour for simple prescriptions
- Facility to courier for outstation patients





## Patient services in a hospital

## **Out Patient services**

- OPD Clinic visit Doctor / Investigation
- Optical dispensing
- Pharmacy
- Lab
- Medical Transcription

## Inpatient services

- IP Admission Medical / Surgical treatment – Discharge
- Stay / Ambulatory service



# End Point Customer Satisfaction

- Various models to access customer satisfaction
  - Interpersonal Behaviour from staff (courtesy, friendliness, approach)
  - Medical competence
  - Information
  - Access, Availability
  - Accommodation (Physical space, comfort and cleanliness)
  - Empathy (Moral and emotional)





# Controlling Service Processes

- Reliability and consistency are important
- Capable processes can be created through implementation of statistical process control
- Quality systems should not only provide process definition but also be a catalyst for quality improvement



## Service Recovery

- All organisations need to have service recovery procedures in place
- Service recovery is the act of dealing with service failures
- Service recovery should lead to
  - Increased customer satisfaction
  - Retention process imporvements
  - Improved financial performance
- Service recovery has three essential ingredients
  - Prevention of repetitions
  - Excellent complaint handling
  - Proactive service recovery



## Conclusion

- Breakdown the process
- Collect data
- Analyze the root cause
- Innovative ideas to solve the problem
- Use Technology wherever possible
- Team work

