

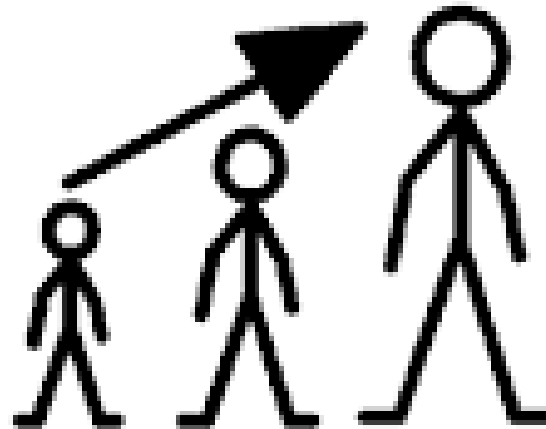


Communauté  
d'Universités et d'Établissements  
Lille Nord de France



Centre Hospitalier Régional  
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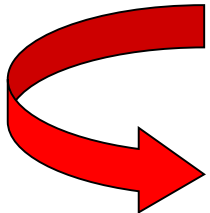
# Medication adherence in kidney recipient after transition: the experience at Lille



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Clinical pharmacist***

# Introduction

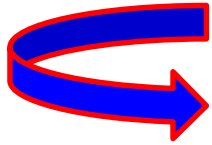
- **Non-adherence leads to:**
  - **Misdiagnosis**
  - **Rejection:** acute rejection (estimated risk at 15 to 60%) and chronic rejection (estimated risk at 5 to 36%)
  - **poor health affecting quality of life**
  - **graft loss** (estimated risk at 15%) **or death**



NA estimated at **35% in kidney transplants** (25 to 50%)  
the risk is 5 to 7 times higher than for adherent recipients

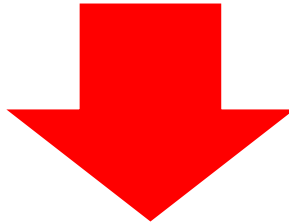
# Adherence after transition

- During the transition NA reaches a peak ranging from **40% to 70%**



**4 times higher than in adults**

*Harden et al 2012, Gilleland et al 2012*



**1. Teenage behavior**

**2. Lack coordination between paediatric and adult units**

*Harden et al 2012, Larosa et al 2011, Shemesh et al 2010, Mc Donagh et al 2010*

# Definition

- **Compliance**

“the extent to which the patient’s behaviour matches the prescriber’s recommendations”



# Definition

- **concordance**

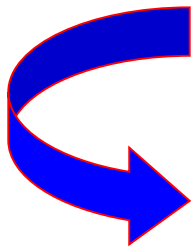
“an agreement reached after negotiation between a patient and a healthcare professional that respects the beliefs and wishes of a patient in determining whether, when and how medicines need to be taken”



# Definition

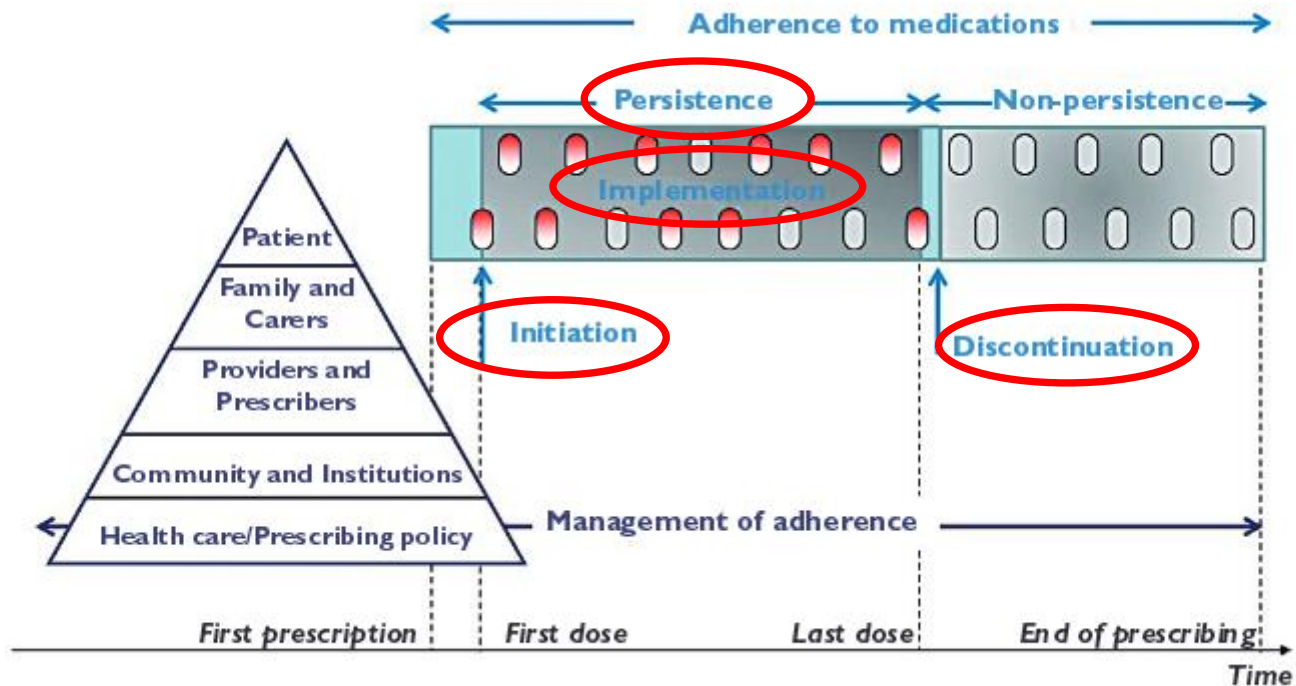
- **Adherence**

“the extent to which a person’s behavior corresponds with the agreed recommendations of a health care provider”



Therapeutic alliance

# Process of adherence



# Factors related to NA

## socio-economic

Age



Gender



Level of education

friends  
& family

Social support



# Factors related to NA

## treatment-related factors

co-morbidities (>6)

drugs/day (>5)

pills/day (>10)

intakes/ day (>2)

side effects



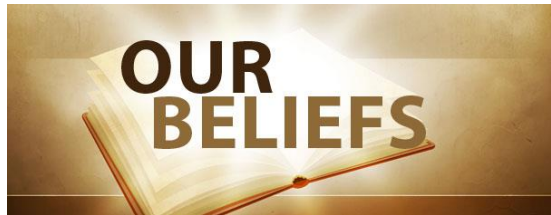
# Factors related to NA

## patient-related

Satisfaction



Beliefs



Mental disease



# Factors related to NA

## Desease-related

Time since transplantation

M3

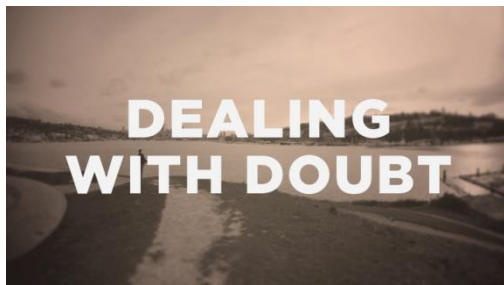
M6

1 year

2 years

3 years

Donner - Recevoir



*Couzi et al 2013*  
*Germani et al 2011,*

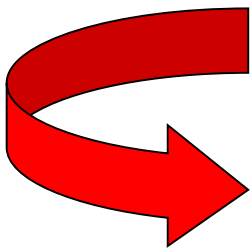
# Method of assessment

- **Direct Methods**

clinical observations



drug monitoring



Limitation: “white-coat adherence”

# Method of assessment

- Indirect methods

Patient interviews



Tablet counting



Prescriptions refill

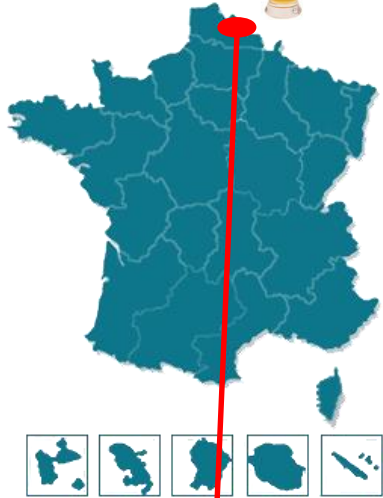


Self-reports



Limitations

# Kidney transplantation in France and in Lille



	2008	2009	2010	2011	2012	2013
<b>Heart</b>	360	359	356	398	397	410
<b>Heart-lung</b>	19	21	19	12	20	11
<b>Lung</b>	196	231	244	312	322	298
<b>Liver</b>	1011	1047	1092	1164	1161	1239
<b>Kidney</b>	<b>2937 (222)</b>	<b>2826 (223)</b>	<b>2892 (283)</b>	<b>2976 (302)</b>	<b>3044 (357)</b>	<b>3069 (401)</b>
<b>Pancreas</b>	84	89	96	73	72	85
<b>Intestin</b>	13	7	9	10	7	3
<b>Total</b>	<b>4620</b>	<b>4580</b>	<b>4708</b>	<b>4945</b>	<b>5023</b>	<b>5115</b>

in 2014  
170  
Kidney  
transplantations

# Adherence after transition

- **Retrospective** study
- **Prospective** study: pharmaceutical consultations
- **Adult Kidney transplantation unit** in Lille

# Adherence after transition

- N= 455 patients



N= 19 patients between 18 and 27 yo



# Socio demographic factors

N=19

<b>Age (year)</b>	23+/-2
<b>Gender n (%)</b>	
<i>M</i>	12(63)
<i>F</i>	7 (37)
<b>Marital status n (%)</b>	
single	7 (37)
married/ couple	7 (37)
family	5 (26)
<b>Education level n (%)</b>	
none	5 (26)
low level	14 (74)
high level	0 (0)
<b>Working activity n (%)</b>	11 (58)

# Disease related factors

N=19

**cr (mg/dl)**

15+/-6

**mdrd (ml/min)**

65+/-25 stage 2

## **Kidney disease**

*glomerular disease*

7 (37)

*tubular disease*

9 (47)

*other*

3 (16)

## **Co morbidities**

Cardiovascular risk factor

10 (53)

History of cancer

2 (11)

## **Dialysis**

*no dialysis*

2 (11)

*Haemodialysis*

11 (58)

*peritoneal dialysis*

6 (32)

## **Time since transplantation**

93+/-61 mois (8 years)

## **Number of transplantation**

1

16 (84)

2 or more

3 (16)

# Treatment related factors

N=19

drugs/d (n)	6+/-2
pills/d (n)	10+/-3
intakes/d (n)	2
<b>IS treatment n(%)</b>	
<i>Tacrolimus</i>	1 (5)
<i>Tacrolimus LP</i>	10 (53)
<i>Ciclosporine</i>	8(42)
<i>Steroides</i>	18 (95)
<i>MMF</i>	11 (58)
<i>Azathioprine</i>	2 (11)
<i>Everolimus</i>	3 (16)
<i>Sirolimus</i>	1 (5)
<b>Disease knowledge</b>	
<i>none</i>	4 (21)
<i>moderate</i>	2 (11)
<i>high</i>	12 (63)
<b>Treatment knowledge</b>	
<i>none</i>	0 (0)
<i>moderate</i>	11 (58)
<i>high</i>	8 (42)

# Patient related factors

- No use of **anxiolytics**
- No use of **antidepressant drugs**
- No follow up by a **psychiatrist**
- No **self medication** declared

# Adherence

- Morisky Green Self report

This morning, did you forget to take your medication?

Yes no

Since the last medical visit, have you been out of medication?

Does it happen later than

Does it happen

Does it happen that sometimes you think you have too much medication so you don't take them?

Yes no

Do you think that you have too much drugs to take?

Yes no

**0 « yes » = excellent adherence**  
**1 or 2 « yes » = moderate adherence**  
**3 or more « yes » = bad adherence**

# Adherence

N=19

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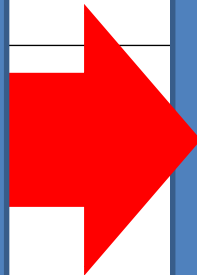
## GRUPE A

0 « yes » = Adherence  
1 « yes » or > = Non adherence

N=19

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	n (%)
Adherent	4 (21)
Non adherent	13 (68)
no response	2 (11)



## GRUPE B

0 or 1 « yes » = Adherence  
2 or > « yes » = Non adherence

N=19

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	n (%)
Adherent	14 (74)
Non adherent	3 (16)
no response	2 (11)

	GRUPE A N=3	GRUPE B N=13
<b>age (year)</b>	23+/-2	23+/-2
<b>gender n (%)</b>		
<i>H</i>	1(33)	9 (69)
<i>F</i>	2(67)	4 (31)
<b>Marital status n (%)</b>		
single	1(33)	4 (31)
married/ couple	2(67)	6 (46)
family	0 (0)	3 (23)
<b>Education level n (%)</b>		
none	1(33)	5 (38)
low level	2(67)	8 (62)
<b>Working activity n (%)</b>	3 (100)	7 (54)
<b>drugs/d (n)</b>	6+/-2	6+/-2
<b>pills/d (n)</b>	10+/-4	10+/-3
<b>intakes /d</b>	2	2
<b>IS treatment n (%)</b>		
<b>advagraf</b>	2 (67)	7 (54)
<b>ciclo</b>	1 (33)	6 (46)
<b>corticoides</b>	2 (67)	12 (92)
<b>cellcept</b>	2 (67)	9 (69)
<b>azathioprine</b>	0 (0)	1 (8)
<b>certican</b>	1 (33)	2 (15)
<b>Disease knowledge</b>		
<i>none</i>	1 (33)	2 (15)
<i>moderate</i>	0 (0)	1 (8)
<i>high</i>	2 (67)	10 (77)
<b>Treatment knowledge</b>		
<i>moderate</i>	1 (33)	8 (62)
<i>high</i>	2 (67)	5 (38)

<b>MDRD</b>		
stage 1	1 (33)	1 (8)
stage 2	2 (67)	6 (46)
stage 3	0 (0)	5 (38)
stage 4	0 (0)	1 (8)
<b>Kidney disease</b>		
glomerular	2 (67)	6 (46)
tubular	1 (33)	6 (46)
other	0 (0)	1 (8)
<b>Dialysis</b>		
none	1 (33)	1 (8)
Haemodialysis	1 (33)	7 (54)
peritoneal dialysis	1 (33)	5 (38)
<b>Time since transplantation (months)</b>	93+/-61 (8y)	81+/-57 (7y)
<b>Number of transplantation</b>		
1	3 (100)	11 (85)
2 or more	0(0)	2 (15)
<b>Cardiovascular risk factor</b>	1 (33)	9 (69)
<b>history of cancer</b>	1 (33)	2 (15)



# Conclusion

- Non-adherence is **worthy of attention**
- The **absence of consensus** is a problem for its measure and interpretation
- It is recommended to use **mutiple methods** considering that **self reports** are the cornerstone
- Successful intervention to improve adherence must be **multidimensional**

"We combined all your medications  
into ONE convenient dose."



**Thank you**